

Sequence Listing

<110> Ashkenazi, Avi J.
Baker, Kevin P.
Botstein, David
Desnoyers, Luc
Eaton, Dan L.
Ferrara, Napoleone
Fong, Sherman
Gerber, Hanspeter
Gerritsen, Mary E.
Goddard, Audrey
Godowski, Paul J.
Grimaldi, J. Christopher
Gurney, Austin L.
Kl javin, Ivar J.
Napier, Mary A.
Pan, James
Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
Tumas, Daniel
Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
Zhang, Zemin

<120> Secreted and Transmembrane Polypeptides and Nucleic
Acids Encoding the Same

<130> P2730P1C29

<150> 60/049787

<151> 1997-06-16

<150> 60/062250

<151> 1997-10-17

<150> 60/065186

<151> 1997-11-12

<150> 60/065311

<151> 1997-11-13

<150> 60/066770

<151> 1997-11-24

<150> 60/075945

<151> 1998-02-25

<150> 60/078910

<151> 1998-03-20

<150> 60/083322

<151> 1998-04-28

<150> 60/084600

<151> 1998-05-07

<150> 60/087106

<151> 1998-05-28

<150> 60/087607

<151> 1998-06-02
<150> 60/087609
<151> 1998-06-02

<150> 60/087759
<151> 1998-06-02

<150> 60/087827
<151> 1998-06-03

<150> 60/088021
<151> 1998-06-04

<150> 60/088025
<151> 1998-06-04

<150> 60/088026
<151> 1998-06-04

<150> 60/088028
<151> 1998-06-04

<150> 60/088029
<151> 1998-06-04

<150> 60/088030
<151> 1998-06-04

<150> 60/088033
<151> 1998-06-04

<150> 60/088326
<151> 1998-06-04

<150> 60/088167
<151> 1998-06-05

<150> 60/088202
<151> 1998-06-05

<150> 60/088212
<151> 1998-06-05

<150> 60/088217
<151> 1998-06-05

<150> 60/088655
<151> 1998-06-09

<150> 60/088734
<151> 1998-06-10

<150> 60/088738
<151> 1998-06-10

<150> 60/088742
<151> 1998-06-10

<150> 60/088810
<151> 1998-06-10

<150> 60/088824

<151> 1998-06-10

<150> 60/088826
<151> 1998-06-10

<150> 60/088858
<151> 1998-06-11

<150> 60/088861
<151> 1998-06-11

<150> 60/088876
<151> 1998-06-11

<150> 60/089105
<151> 1998-06-12

<150> 60/089440
<151> 1998-06-16

<150> 60/089512
<151> 1998-06-16

<150> 60/089514
<151> 1998-06-16

<150> 60/089532
<151> 1998-06-17

<150> 60/089538
<151> 1998-06-17

<150> 60/089598
<151> 1998-06-17

<150> 60/089599
<151> 1998-06-17

<150> 60/089600
<151> 1998-06-17

<150> 60/089653
<151> 1998-06-17

<150> 60/089801
<151> 1998-06-18

<150> 60/089907
<151> 1998-06-18

<150> 60/089908
<151> 1998-06-18

<150> 60/089947
<151> 1998-06-19

<150> 60/089948
<151> 1998-06-19

<150> 60/089952
<151> 1998-06-19

<150> 60/090246

<151> 1998-06-22
<150> 60/090252
<151> 1998-06-22

<150> 60/090254
<151> 1998-06-22

<150> 60/090349
<151> 1998-06-23

<150> 60/090355
<151> 1998-06-23

<150> 60/090429
<151> 1998-06-24

<150> 60/090431
<151> 1998-06-24

<150> 60/090435
<151> 1998-06-24

<150> 60/090444
<151> 1998-06-24

<150> 60/090445
<151> 1998-06-24

<150> 60/090472
<151> 1998-06-24

<150> 60/090535
<151> 1998-06-24

<150> 60/090540
<151> 1998-06-24

<150> 60/090542
<151> 1998-06-24

<150> 60/090557
<151> 1998-06-24

<150> 60/090676
<151> 1998-06-25

<150> 60/090678
<151> 1998-06-25

<150> 60/090690
<151> 1998-06-25

<150> 60/090694
<151> 1998-06-25

<150> 60/090695
<151> 1998-06-25

<150> 60/090696
<151> 1998-06-25

<150> 60/090862

<151> 1998-06-26
<150> 60/090863
<151> 1998-06-26

<150> 60/091360
<151> 1998-07-01

<150> 60/091478
<151> 1998-07-02

<150> 60/091544
<151> 1998-07-01

<150> 60/091519
<151> 1998-07-02

<150> 60/091626
<151> 1998-07-02

<150> 60/091633
<151> 1998-07-02

<150> 60/091978
<151> 1998-07-07

<150> 60/091982
<151> 1998-07-07

<150> 60/092182
<151> 1998-07-09

<150> 60/092472
<151> 1998-07-10

<150> 60/091628
<151> 1998-07-02

<150> 60/091646
<151> 1998-07-02

<150> 60/091673
<151> 1998-07-02

<150> 60/093339
<151> 1998-07-20

<150> 60/094651
<151> 1998-07-30

<150> 60/095282
<151> 1998-08-04

<150> 60/095285
<151> 1998-08-04

<150> 60/095302
<151> 1998-08-04

<150> 60/095318
<151> 1998-08-04

<150> 60/095321

<151> 1998-08-04
<150> 60/095301
<151> 1998-08-04

<150> 60/095325
<151> 1998-08-04

<150> 60/095916
<151> 1998-08-10

<150> 60/095929
<151> 1998-08-10

<150> 60/096012
<151> 1998-08-10

<150> 60/096143
<151> 1998-08-11

<150> 60/096146
<151> 1998-08-11

<150> 60/096329
<151> 1998-08-12

<150> 60/096757
<151> 1998-08-17

<150> 60/096766
<151> 1998-08-17

<150> 60/096768
<151> 1998-08-17

<150> 60/096773
<151> 1998-08-17

<150> 60/096791
<151> 1998-08-17

<150> 60/096867
<151> 1998-08-17

<150> 60/096891
<151> 1998-08-17

<150> 60/096894
<151> 1998-08-17

<150> 60/096895
<151> 1998-08-17

<150> 60/096897
<151> 1998-08-17

<150> 60/096949
<151> 1998-08-18

<150> 60/096950
<151> 1998-08-18

<150> 60/096959

<151> 1998-08-18
<150> 60/096960
<151> 1998-08-18

<150> 60/097022
<151> 1998-08-18

<150> 60/097141
<151> 1998-08-19

<150> 60/097218
<151> 1998-08-20

<150> 60/097661
<151> 1998-08-24

<150> 60/097952
<151> 1998-08-26

<150> 60/097954
<151> 1998-08-26

<150> 60/097955
<151> 1998-08-26

<150> 60/098014
<151> 1998-08-26

<150> 60/097971
<151> 1998-08-26

<150> 60/097974
<151> 1998-08-26

<150> 60/097978
<151> 1998-08-26

<150> 60/097986
<151> 1998-08-26

<150> 60/097979
<151> 1998-08-26

<150> 60/098525
<151> 1998-08-31

<150> 60/100634
<151> 1998-09-16

<150> 60/100858
<151> 1998-09-17

<150> 60/113296
<151> 1998-12-22

<150> 60/123957
<151> 1999-03-12

<150> 60/141037
<151> 1999-06-23

<150> 60/143048

<151> 1999-07-07
<150> 60/144758
<151> 1999-07-20

<150> 60/145698
<151> 1999-07-26

<150> 60/146222
<151> 1999-07-28

<150> 60/149396
<151> 1999-08-17

<150> 60/158663
<151> 1999-10-08

<150> 60/213637
<151> 2000-06-23

<150> 60/230978
<151> 2000-09-07

<150> 08/743698
<151> 1996-11-06

<150> 08/876698
<151> 1997-06-16

<150> 08/965056
<151> 1997-11-05

<150> 09/105413
<151> 1998-06-26

<150> 09/168978
<151> 1998-10-07

<150> 09/187368
<151> 1998-11-06

<150> 09/202054
<151> 1998-12-07

<150> 09/218517
<151> 1998-12-22

<150> 09/254311
<151> 1999-03-03

<150> 09/254460
<151> 1999-03-09

<150> 09/267213
<151> 1999-03-12

<150> 09/284291
<151> 1999-04-12

<150> 09/380137
<151> 1999-08-25

<150> 09/380138

<151> 1998-08-25

<150> 09/380139
<151> 1999-08-25

<150> 09/403296
<151> 1999-10-18

<150> 09/423844
<151> 1999-11-12

<150> 09/664610
<151> 2000-09-18

<150> 09/665350
<151> 2000-09-18

<150> 09/709238
<151> 2000-11-08

<150> 09/808689
<151> 2001-03-14

<150> 09/854816
<151> 2001-05-15

<150> 09/866028
<151> 2001-05-25

<150> 09/866034
<151> 2001-05-25

<150> 09/872035
<151> 2001-06-01

<150> 09/882636
<151> 2001-06-14

<150> 09/941,992
<151> 2001-08-28

<150> PCT/US97/20069
<151> 1997-11-05

<150> PCT/US98/19330
<151> 1998-09-16

<150> PCT/US98/19437
<151> 1998-09-17

<150> PCT/US98/21141
<151> 1998-10-07

<150> PCT/US98/25108
<151> 1998-12-01

<150> PCT/US99/00106
<151> 1999-01-05

<150> PCT/US99/05028
<151> 1999-03-08

<150> PCT/US99/12252

<151> 1999-06-02

<150> PCT/US99/21090
<151> 1999-09-15

<150> PCT/US99/21547
<151> 1999-09-15

<150> PCT/US99/28313
<151> 1999-11-30

<150> PCT/US99/28301
<151> 1999-12-01

<150> PCT/US99/28634
<151> 1999-12-01

<150> PCT/US99/30095
<151> 1999-12-16

<150> PCT/US99/30911
<151> 1999-12-20

<150> PCT/US00/00219
<151> 2000-01-05

<150> PCT/US00/00376
<151> 2000-01-06

<150> PCT/US00/03565
<151> 2000-02-11

<150> PCT/US00/04341
<151> 2000-02-18

<150> PCT/US00/04414
<151> 2000-02-22

<150> PCT/US00/04914
<151> 2000-02-24

<150> PCT/US00/05004
<151> 2000-02-24

<150> PCT/US00/05841
<151> 2000-03-02

<150> PCT/US00/06319
<151> 2000-03-10

<150> PCT/US00/06884
<151> 2000-03-15

<150> PCT/US00/07377
<151> 2000-03-20

<150> PCT/US00/08439
<151> 2000-03-30

<150> PCT/US00/13358
<151> 2000-05-15

<150> PCT/US00/13705

<151> 2000-05-17
 <150> PCT/US00/14042
 <151> 2000-05-22
 <150> PCT/US00/14941
 <151> 2000-05-30
 <150> PCT/US00/15264
 <151> 2000-06-02
 <150> PCT/US00/20710
 <151> 2000-07-28
 <150> PCT/US00/22031
 <151> 2000-08-11
 <150> PCT/US00/23522
 <151> 2000-08-23
 <150> PCT/US00/23328
 <151> 2000-08-24
 <150> PCT/US00/30952
 <151> 2000-11-08
 <150> PCT/US00/32678
 <151> 2000-12-01
 <150> PCT/US01/06520
 <151> 2001-02-28
 <150> PCT/US01/17800
 <151> 2001-06-01
 <150> PCT/US01/19692
 <151> 2001-06-20
 <150> PCT/US01/21066
 <151> 2001-06-29
 <150> PCT/US01/21735
 <151> 2001-07-09
 <160> 532
 <210> 1
 <211> 1943
 <212> DNA
 <213> Homo sapiens
 <400> 1
 cggacgcgtg ggtgcgaggc gaaggtgacc ggggaccgag catttcagat 50
 ctgctcggta gacctgggtgc accaccacca tgttggctgc aaggctgggtg 100
 tgtctccgga cactaccttc tagggttttc caccagctt tcaccaaggc 150
 ctcccctggt gtgaagaatt ccatcacgaa gaatcaatgg ctgttaacac 200
 ctagcaggga atatgccacc aaaacaagaa ttgggatccg gcgtgggaga 250
 actggccaag aactcaaaga ggcagcattg gaaccatcga tggaaaaaat 300

atttaaaatt gatcagatgg gaagatggtt tgttgctgga ggggctgctg 350
 ttggtcttgg agcattgtgc tactatggct tgggactgtc taatgagatt 400
 ggagctattg aaaaggctgt aatttggcct cagtatgtca aggatagaat 450
 tcattccacc tatatgtact tagcaggag tatttggtta acagctttgt 500
 ctgccatagc aatcagcaga acgcctgttc tcatgaactt catgatgaga 550
 ggctcttggg tgacaattgg tgtgacctt gcagccatgg ttggagctgg 600
 aatgctggta cgatcaatac catatgacca gagcccaggc ccaaagcatc 650
 ttgcttgggt gctacattct ggtgtgatgg gtgcagtggg ggctcctctg 700
 acaatattag ggggtcctct tctcatcaga gctgcatggg acacagctgg 750
 cattgtggga ggcctctcca ctgtggccat gtgtgcgccc agtgaaaagt 800
 ttctgaacat ggggtgaccc ctgggagtg gctgggtct cgtctttgtg 850
 tctctattgg gatctatgtt tcttccacct accaccgtgg ctggtgccac 900
 tctttactca gtggcaatgt acggtggatt agttcttttc agcatgttcc 950
 ttctgtatga taccagaaa gtaatcaagc gtgcagaagt atcaccaatg 1000
 tatggagttc aaaaatatga tccattaac tcgatgctga gtatctacat 1050
 ggatacatta aatataattt tgcgagttgc aactatgctg gcaactggag 1100
 gcaacagaaa gaaatgaagt gactcagctt ctggcttctc tgctacatca 1150
 aatatcttgt ttaatggggc agatatgcat taaatagttt gtacaagcag 1200
 ctttcgttga agtttagaag ataagaaaca tgtcatcata tttaaatgtt 1250
 ccggtaatgt gatgcctcag gtctgocctt ttttctggag aataaatgca 1300
 gtaatcctct cccaaataag cacacacatt ttcaattctc atgtttgagt 1350
 gattttaaaa tgttttggtg aatgtgaaaa cttaaagttt tgtcatgaga 1400
 atgtaagtct tttttctact ttaaaattta gtaggttcac tgagtaacta 1450
 aaatttagca aacctgtgtt tgcataattt tttggagtgc agaattattg 1500
 aattaatgtc ataagtgatt tggagctttg gtaaagggac cagagagaag 1550
 gagtcacctg cagtcttttg tttttttaa tacttagaac ttagcacttg 1600
 tgttattgat tagtgaggag ccagtaagaa acatctgggt atttggaac 1650
 aagtggcatc tgttacattc atttgctgaa ctttaacaaa ctgttcatcc 1700
 tgaaacaggc acaggtgatg cattctctct ctgttgcttc tcagtgtctt 1750
 ctttccaata tagatgtggg catgtttgac ttgtacagaa tgttaatcat 1800
 acagagaatc cttgatggaa ttatatatgt gtgttttact tttgaatgtt 1850
 acaaaaggaa ataacttta aactattctc aagagaaaat attcaaagca 1900

tgaaatatgt tgctttttcc agaatacaaa cagtatactc atg 1943

<210> 2
 <211> 345
 <212> PRT
 <213> Homo sapiens

<400> 2
 Met Leu Ala Ala Arg Leu Val Cys Leu Arg Thr Leu Pro Ser Arg
 1 5 10 15
 Val Phe His Pro Ala Phe Thr Lys Ala Ser Pro Val Val Lys Asn
 20 25 30
 Ser Ile Thr Lys Asn Gln Trp Leu Leu Thr Pro Ser Arg Glu Tyr
 35 40 45
 Ala Thr Lys Thr Arg Ile Gly Ile Arg Arg Gly Arg Thr Gly Gln
 50 55 60
 Glu Leu Lys Glu Ala Ala Leu Glu Pro Ser Met Glu Lys Ile Phe
 65 70 75
 Lys Ile Asp Gln Met Gly Arg Trp Phe Val Ala Gly Gly Ala Ala
 80 85 90
 Val Gly Leu Gly Ala Leu Cys Tyr Tyr Gly Leu Gly Leu Ser Asn
 95 100 105
 Glu Ile Gly Ala Ile Glu Lys Ala Val Ile Trp Pro Gln Tyr Val
 110 115 120
 Lys Asp Arg Ile His Ser Thr Tyr Met Tyr Leu Ala Gly Ser Ile
 125 130 135
 Gly Leu Thr Ala Leu Ser Ala Ile Ala Ile Ser Arg Thr Pro Val
 140 145 150
 Leu Met Asn Phe Met Met Arg Gly Ser Trp Val Thr Ile Gly Val
 155 160 165
 Thr Phe Ala Ala Met Val Gly Ala Gly Met Leu Val Arg Ser Ile
 170 175 180
 Pro Tyr Asp Gln Ser Pro Gly Pro Lys His Leu Ala Trp Leu Leu
 185 190 195
 His Ser Gly Val Met Gly Ala Val Val Ala Pro Leu Thr Ile Leu
 200 205 210
 Gly Gly Pro Leu Leu Ile Arg Ala Ala Trp Tyr Thr Ala Gly Ile
 215 220 225
 Val Gly Gly Leu Ser Thr Val Ala Met Cys Ala Pro Ser Glu Lys
 230 235 240
 Phe Leu Asn Met Gly Ala Pro Leu Gly Val Gly Leu Gly Leu Val
 245 250 255
 Phe Val Ser Ser Leu Gly Ser Met Phe Leu Pro Pro Thr Thr Val
 260 265 270
 Ala Gly Ala Thr Leu Tyr Ser Val Ala Met Tyr Gly Gly Leu Val

	275		280		285
Leu Phe Ser Met	Phe Leu Leu Tyr Asp	Thr Gln Lys Val Ile Lys			
	290	295			300
Arg Ala Glu Val	Ser Pro Met Tyr Gly	Val Gln Lys Tyr Asp	Pro		
	305	310			315
Ile Asn Ser Met	Leu Ser Ile Tyr Met	Asp Thr Leu Asn Ile Phe			
	320	325			330
Met Arg Val Ala	Thr Met Leu Ala Thr	Gly Gly Asn Arg Lys Lys			
	335	340			345

<210> 3
 <211> 43
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 3
 tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 4
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 4
 caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 5
 <211> 3033
 <212> DNA
 <213> Homo sapiens

<400> 5
 gaaggctgcc tcgctggtcc gaattcggtg ggcgcaagtc cgcccgtctc 50
 cgccttctgc atcgcggtct cggcggcttc cacctagaca cctaacagtc 100
 gcggagccgg ccgcgtcgtg agggggctcg caccggggagt cgggcggtct 150
 tgtgcatctt ggctacctgt gggtcgaaga tgtcggacat cggagactgg 200
 ttcaggagca tcccggcgat caccgcctat tggttogccg ccaccgtcgc 250
 cgtgcccttg gtcggcaaac tcggcctcat cagcccggcc tacctcttcc 300
 tctggcccga agccttcctt tatcgctttc agatttggag gccaatcact 350
 gccacctttt atttcctgtt gggtcaggga actggatttc tttatttggg 400
 caatttatat ttcttatatc agtattctac gcgacttgaa acaggagctt 450
 ttgatgggag gccagcagac tatttattca tgctcctctt taactggatt 500
 tgcacgtga ttactggctt agcaatggat atgcagttgc tgatgattcc 550

tctgatcatg tcagtacttt atgtctgggc ccagctgaac agagacatga 600
ttgtatcatt ttggtttgga acacgattta aggcctgcta tttaccctgg 650
gttatccttg gattcaacta tatcatcgga ggctcggtta tcaatgagct 700
tattggaaat ctggttggaac atctttattt tttcctaatag ttcagatacc 750
caatggactt gggaggaaga aattttctat ccacacctca gtttttgtag 800
cgctggctgc ccagtaggag agggaggagta tcaggatttg gtgtgcccc 850
tgctagcatg aggcgagctg ctgatcagaa tggcggaggc gggagacaca 900
actggggcca gggctttcga cttggagacc agtgaagggg cggcctcggg 950
cagccgctcc tctcaagcca catttctcc cagtgtctgg tgcacttaac 1000
aactgcgttc tggctaacac tgttgacact gaccacact gaatgtagtc 1050
tttcagtacg agacaaagt tcttaaacc cgaagaaaaa tataagtgtt 1100
ccacaagttt cagattctc attcaagtcc ttactgtgt gaagaacaaa 1150
taccaactgt gcaaattgca aaactgacta catttttttg tgtcttctct 1200
tctcccttt ccgtctgaat aatgggttt agcgggtcct aatctgtctg 1250
cattgagctg gggctgggtc accaaaccct tcccaaaagg acctatctc 1300
tttcttgac acatgcctct ctccacttt tcccaacccc cacatttgca 1350
actagaaaaa gttgccata aaattgctct gcccttgaca ggttctgtta 1400
tttattgact tttgccaagg ctggtcacaa caatcatatt cagttatatt 1450
tccccttttg gtggcagaac tgttaccaat agggggagaa gacagccacg 1500
gatgaagcgt ttctcagctt ttggaattgc ttgactgac atccgttggt 1550
aacggttgc cactcttcag atatttttta taaaaaaagt accactgagt 1600
tcatgagggc cacagatttg ttattaatga gatacgaggg ttggtgctgg 1650
gtgtttgttt cctgagctaa gtgatcaaga ctgtagtga gttgcagcta 1700
acatgggtta ggtttaaacc atgggggatg caccctttg cgtttcatat 1750
gtagccctac tggctttgtg tagctggagt agttgggttg ctttgtgtta 1800
ggaggatcca gatcatgttg gctacaggga gatgctctct ttgagaggtc 1850
ctgggcattg attccattt caatctcatt ctggatatgt gttcattgag 1900
taaaggagga gagacctca tacgctattt aaatgtcact tttttgccta 1950
tccccogttt tttggtcag tttcaattaa ttgtgaggaa ggcgcagctc 2000
ctctctgcac gtagatcatt ttttaaagct aatgtaagca catctaaggg 2050
aataacatga ttttaagggtt aaatggcttt agaatcattt gggtttgagg 2100
gtgtgttatt ttgagtcag aatgtacaag ctctgtgaat cagaccagct 2150

taaataacca cacctttttt tcgtaggtgg gcttttccta tcagagcttg 2200
 gctcataacc aaataaagtt ttttgaaggc catggctttt cacacagtta 2250
 ttttatttta tgacgttatc tgaaagcaga ctgttaggag cagtattgag 2300
 tggctgtcac actttgaggc aactaaaaag gcttcaaacg ttttgatcag 2350
 tttcttttca ggaaacattg tgctctaaca gtatgactat tctttccccc 2400
 actcttaaac agtgtgatgt gtgttatcct aggaaatgag agttggcaaa 2450
 caacttctca ttttgaatag agtttgtgtg tacttctcca tatttaattt 2500
 atatgataaa ataggtgggg agagtctgaa ccttaactgt catgttttgt 2550
 tgttcattctg tggccacaat aaagtttact tgtaaaattt tagaggccat 2600
 tactccaatt atgttgcacg tacactcatt gtacaggcgt ggagactcat 2650
 tgtatgtata agaatatttc tgacagttag tgacccggag tctctggtgt 2700
 accctcttac cagtcagctg cctgcgagca gtcatttttt cctaaagggt 2750
 tacaagtatt tagaactttt cagttcaggg caaaatgttc atgaagttat 2800
 tcctcttaaa catggtagg aagctgatga cgttattgat tttgtctgga 2850
 ttatgtttct ggaataattt taccaaaaca agctatttga gttttgactt 2900
 gacaaggcaa aacatgacag tggattctct ttacaaatgg aaaaaaaaaa 2950
 tccttatttt gtataaagga cttccctttt tgtaaaactaa tcctttttat 3000
 tggtaaaaat tgtaaatata aatgtgcaac ttg 3033

<210> 6
 <211> 251
 <212> PRT
 <213> Homo sapiens

<400> 6
 Met Ser Asp Ile Gly Asp Trp Phe Arg Ser Ile Pro Ala Ile Thr
 1 5 10 15
 Arg Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys
 20 25 30
 Leu Gly Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala
 35 40 45
 Phe Leu Tyr Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe
 50 55 60
 Tyr Phe Pro Val Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn
 65 70 75
 Leu Tyr Phe Leu Tyr Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala
 80 85 90
 Phe Asp Gly Arg Pro Ala Asp Tyr Leu Phe Met Leu Leu Phe Asn
 95 100 105

Trp	Ile	Cys	Ile	Val	Ile	Thr	Gly	Leu	Ala	Met	Asp	Met	Gln	Leu	110	115	120
Leu	Met	Ile	Pro	Leu	Ile	Met	Ser	Val	Leu	Tyr	Val	Trp	Ala	Gln	125	130	135
Leu	Asn	Arg	Asp	Met	Ile	Val	Ser	Phe	Trp	Phe	Gly	Thr	Arg	Phe	140	145	150
Lys	Ala	Cys	Tyr	Leu	Pro	Trp	Val	Ile	Leu	Gly	Phe	Asn	Tyr	Ile	155	160	165
Ile	Gly	Gly	Ser	Val	Ile	Asn	Glu	Leu	Ile	Gly	Asn	Leu	Val	Gly	170	175	180
His	Leu	Tyr	Phe	Phe	Leu	Met	Phe	Arg	Tyr	Pro	Met	Asp	Leu	Gly	185	190	195
Gly	Arg	Asn	Phe	Leu	Ser	Thr	Pro	Gln	Phe	Leu	Tyr	Arg	Trp	Leu	200	205	210
Pro	Ser	Arg	Arg	Gly	Gly	Val	Ser	Gly	Phe	Gly	Val	Pro	Pro	Ala	215	220	225
Ser	Met	Arg	Arg	Ala	Ala	Asp	Gln	Asn	Gly	Gly	Gly	Gly	Arg	His	230	235	240
Asn	Trp	Gly	Gln	Gly	Phe	Arg	Leu	Gly	Asp	Gln	245	250					

<210> 7
 <211> 1373
 <212> DNA
 <213> Homo sapiens

<400> 7
 gggggccgcgg tctagggcgg ctacgtgtgt tgccatagcg accattttgc 50
 attaactggt tggtagcttc tatcctgggg gctgagcgac tgcggggccag 100
 ctcttccct actccctctc ggctccttgt ggcccaaagg cctaaccggg 150
 gtccggcggg ctggcctagg gatcttcccc gttgcccctt tggggcgga 200
 tggctgcgga agaagaagac gaggtggagt gggtagtgga gagcatcgcg 250
 gggttcctgc gaggccaga ctggtccatc cccatcttgg actttgtgga 300
 acagaaatgt gaagttaact gcaaaggagg gcatgtgata actccaggaa 350
 gccagagcc ggtgattttg gtggcctgtg tcccccttgt ttttgatgat 400
 gaagaagaaa gcaaattgac ctatacagag attcatcagg aatacaaaga 450
 actagttgaa aagctgttag aaggttacct caaagaaatt ggaattaatg 500
 aagatcaatt tcaagaagca tgcacttctc ctcttgcaaa gaccataca 550
 tcacaggcca ttttgcaacc tgtgttgga gcagaagatt ttactatctt 600
 taaagcaatg atggtccaga aaaacattga aatgcagctg caagccattc 650
 gaataattca agagagaaat ggtgtattac ctgactgctt aacogatggc 700

tctgatgtgg tcagtgcacct tgaacacgaa gagatgaaaa tcctgagga 750
 agttcttaga aaatcaaaag aggaatatga ccaggaagaa gaaaggaaga 800
 ggaaaaaaca gttatcagag gctaaaacag aagagcccac agtgcattcc 850
 agtgaagctg caataatgaa taattcccaa ggggatgggtg aacattttgc 900
 acaccacccc tcagaagtta aaatgcattt tgctaatacag tcaatagaac 950
 ctttggaag aaaagtggaa aggtctgaaa cttcctccct cccacaaaaa 1000
 ggctgaaga ttctggctt agagcatgcg agcattgaag gaccaatagc 1050
 aaacttatca gtacttgaa cagaagaact tcggcaacga gaacactatc 1100
 tcaagcagaa gagagataag ttgatgtcca tgagaaagga tatgaggact 1150
 aaacagatac aaaatatgga gcagaaagga aaaccactg gggaggtaga 1200
 ggaaatgaca gagaaaccag aaatgacagc agaggagaag caaacattac 1250
 taaagaggag attgcttgca gagaaactca aagaagaagt tattaataag 1300
 taataattaa gaacaattta acaaaatgga agttcaaatt gtcttaaaaa 1350
 taaattattt agtccttaca ctg 1373

<210> 8
 <211> 367
 <212> PRT
 <213> Homo sapiens

<400> 8
 Met Ala Ala Glu Glu Glu Asp Glu Val Glu Trp Val Val Glu Ser
 1 5 10 15
 Ile Ala Gly Phe Leu Arg Gly Pro Asp Trp Ser Ile Pro Ile Leu
 20 25 30
 Asp Phe Val Glu Gln Lys Cys Glu Val Asn Cys Lys Gly Gly His
 35 40 45
 Val Ile Thr Pro Gly Ser Pro Glu Pro Val Ile Leu Val Ala Cys
 50 55 60
 Val Pro Leu Val Phe Asp Asp Glu Glu Glu Ser Lys Leu Thr Tyr
 65 70 75
 Thr Glu Ile His Gln Glu Tyr Lys Glu Leu Val Glu Lys Leu Leu
 80 85 90
 Glu Gly Tyr Leu Lys Glu Ile Gly Ile Asn Glu Asp Gln Phe Gln
 95 100 105
 Glu Ala Cys Thr Ser Pro Leu Ala Lys Thr His Thr Ser Gln Ala
 110 115 120
 Ile Leu Gln Pro Val Leu Ala Ala Glu Asp Phe Thr Ile Phe Lys
 125 130 135
 Ala Met Met Val Gln Lys Asn Ile Glu Met Gln Leu Gln Ala Ile
 140 145 150

Arg	Ile	Ile	Gln	Glu	Arg	Asn	Gly	Val	Leu	Pro	Asp	Cys	Leu	Thr	155	160	165
Asp	Gly	Ser	Asp	Val	Val	Ser	Asp	Leu	Glu	His	Glu	Glu	Met	Lys	170	175	180
Ile	Leu	Arg	Glu	Val	Leu	Arg	Lys	Ser	Lys	Glu	Glu	Tyr	Asp	Gln	185	190	195
Glu	Glu	Glu	Arg	Lys	Arg	Lys	Lys	Gln	Leu	Ser	Glu	Ala	Lys	Thr	200	205	210
Glu	Glu	Pro	Thr	Val	His	Ser	Ser	Glu	Ala	Ala	Ile	Met	Asn	Asn	215	220	225
Ser	Gln	Gly	Asp	Gly	Glu	His	Phe	Ala	His	Pro	Pro	Ser	Glu	Val	230	235	240
Lys	Met	His	Phe	Ala	Asn	Gln	Ser	Ile	Glu	Pro	Leu	Gly	Arg	Lys	245	250	255
Val	Glu	Arg	Ser	Glu	Thr	Ser	Ser	Leu	Pro	Gln	Lys	Gly	Leu	Lys	260	265	270
Ile	Pro	Gly	Leu	Glu	His	Ala	Ser	Ile	Glu	Gly	Pro	Ile	Ala	Asn	275	280	285
Leu	Ser	Val	Leu	Gly	Thr	Glu	Glu	Leu	Arg	Gln	Arg	Glu	His	Tyr	290	295	300
Leu	Lys	Gln	Lys	Arg	Asp	Lys	Leu	Met	Ser	Met	Arg	Lys	Asp	Met	305	310	315
Arg	Thr	Lys	Gln	Ile	Gln	Asn	Met	Glu	Gln	Lys	Gly	Lys	Pro	Thr	320	325	330
Gly	Glu	Val	Glu	Glu	Met	Thr	Glu	Lys	Pro	Glu	Met	Thr	Ala	Glu	335	340	345
Glu	Lys	Gln	Thr	Leu	Leu	Lys	Arg	Arg	Leu	Leu	Ala	Glu	Lys	Leu	350	355	360
Lys	Glu	Glu	Val	Ile	Asn	Lys									365		

<210> 9

<211> 418

<212> DNA

<213> Homo sapiens

<400> 9

```

gggcacagca catgtgaagt ttttgatgat gaagaagaaa gcaaattgac 50
ctatacagag attcatcagg aatacaaaga actagttgaa aagctgttag 100
aaggttacct caaagaaatt ggaattaatg aagatcaatt tcaagaagca 150
tgcacttctc ctcttgcaaa gaccataca tcacaggcca tttttgcaac 200
ctgtgttggc agcagaagat ttactatct ttaaagcaat gatggtccag 250
aaaaacattg aaatgcagct gcaagccatt cgaataattc aagagagaaa 300

```

tggtgtatta cctgactgct taaccgatgg ctctgatgtg gtcagtgacc 350
ttgaacacga agagatgaaa atcctgaggg aagttcttag aaaatcaaaa 400
gaggaatatg accaggaa 418

<210> 10
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 10
ttgacctata cagagattca tc 22

<210> 11
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 11
ctaagaactt ccctcaggat ttt 23

<210> 12
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 12
atgaagatca atttcaagaa gcatgcactt ctcctcttgc 40

<210> 13
<211> 2886
<212> DNA
<213> Homo sapiens

<400> 13
gcgtggtttt tggtctgcaa taggcggctt agaggaggagg gctttttcgc 50
ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 100
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgtttcttc 150
cactagaagc tcttctgagg gaggttaatta aaaaacagtg gaatggaaaa 200
acagtgcgtg agtcctcctg taatatgctc cttgtcaaca atgtatacat 250
tctgctagg tgccatattc attgctttaa gctcaagtcg catcttacta 300
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 350
tgtgaatgtg tgctcagaac tgggtgaagct agttttctgt gtgcttgtgt 400
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 450

tcctggaagg aattctctga tttcatgaag tggatccattc ctgcctttct 500
 ttatttcctg gataacttga ttgtcttcta tgtcctgtcc tatcttcaac 550
 cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 600
 ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 650
 cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 700
 ctttacagca caacttgga ggacgtggat ttcatacaga tgcctttttc 750
 agcccttcca attcctgcct tcttttcaga agtgagtgtc ccagaaaaga 800
 caattgtaca gcaaaggaat ggacttttcc tgaagctaaa tggaacacca 850
 cagccagagt tttcagtcac atccgtcttg gcatgggcca tgttcttatt 900
 atagtccagt gttttatttc ttcaatggct aatatctata atgaaaagat 950
 actgaaggag gggaaccagc tactgaaag catcttcata cagaacagca 1000
 aactctattt ctttggcatt ctgtttaatg ggctgactct gggccttcag 1050
 aggagtaacc gtgatcagat taagaactgt ggattttttt atggccacag 1100
 tgcattttca gtagccctta tttttgtaac tgcattccag ggcctttcag 1150
 tggctttcat tctgaagtcc ctggataaca tgttccatgt cttgatggcc 1200
 caggttacca ctgtcattat cacaacagtg tctgtcctgg tctttgactt 1250
 caggccctcc ctggaatttt tcttgggaagc cccatcagtc cttctctcta 1300
 tattttatta taatgccagc aagcctcaag ttccggaata cgcacctagg 1350
 caagaaagga tccgagatct aagtggcaat ctttgggagc gttccagtgg 1400
 ggatggagaa gaactagaaa gacttaccaa acccaagagt gatgagtcag 1450
 atgaagatac tttctaactg gtaccacat agtttgcagc tctcttgaac 1500
 cttattttca cattttcagt gtttgtaata tttatctttt cactttgata 1550
 aaccagaaat gtttctaaat cctaataatc tttgcatata tctagctact 1600
 ccctaaatgg ttccatccaa ggcttagagt acccaaaggc taagaaattc 1650
 taaagaactg atacaggagt aacaatatga agaattcatt aatatctcag 1700
 tacttgataa atcagaaagt tatatgtgca gattattttc cttggccttc 1750
 aagcttccaa aaaacttgta ataatcatgt tagctatagc ttgtatatac 1800
 acatagagat caatttgcca aatattcaca atcatgtagt tctagtttac 1850
 atgccaaagt cttccctttt taacattata aaagctaggt tgtctcttga 1900
 attttgaggc ctagagata gtcattttgc aagtaaagag caacgggacc 1950
 ctttctaaaa acgttggttg aaggacctaa atacctggcc ataccataga 2000
 tttgggatga tgtagtctgt gctaaatatt ttgctgaaga agcagtttct 2050

cagacacaac atctcagaat ttttaattttt agaaattcat gggaaattgg 2100
 atttttgtaa taatcttttg atgtttttaa cattgggttcc ctagtcacca 2150
 tagttaccac ttgtatttta agtcatttaa acaagccacg gtggggcttt 2200
 tttctcctca gtttgaggag aaaaatcttg atgtcattac tcctgaatta 2250
 ttacattttg gagaataaga gggcatttta ttttattagt tactaattca 2300
 agctgtgact attgtatatc tttccaagag ttgaaatgct ggcttcagaa 2350
 tcataccaga ttgtcagtga agctgatgcc taggaacttt taaagggatc 2400
 ctttcaaaag gatcacttag caaacacatg ttgactttta actgatgtat 2450
 gaatattaat actctaaaaa tagaaagacc agtaatatat aagtcacttt 2500
 acagtgttac ttcacactta aaagtgcacg gtatttttca tgggtattttg 2550
 catgcagcca gttaactctc gtagatagag aagtcaggtg atagatgata 2600
 ttaaaaatta gcaaacaaaa gtgacttgct caggggtcatg cagctgggtg 2650
 atgatagaag agtgggcttt aactggcagg cctgtatggt tacagactac 2700
 catactgtaa atatgagctt tatggtgtca ttctcagaaa cttatacatt 2750
 tctgctctcc tttctcctaa gtttcatgca gatgaatata aggtaatatata 2800
 ctattatata attcatttgt gatatccaca ataatatgac tggcaagaat 2850
 tggtggaat ttgtaattaa aataattatt aaacct 2886

<210> 14

<211> 424

<212> PRT

<213> Homo sapiens

<400> 14

Met	Glu	Lys	Gln	Cys	Cys	Ser	His	Pro	Val	Ile	Cys	Ser	Leu	Ser
1				5					10					15
Thr	Met	Tyr	Thr	Phe	Leu	Leu	Gly	Ala	Ile	Phe	Ile	Ala	Leu	Ser
				20					25					30
Ser	Ser	Arg	Ile	Leu	Leu	Val	Lys	Tyr	Ser	Ala	Asn	Glu	Glu	Asn
				35					40					45
Lys	Tyr	Asp	Tyr	Leu	Pro	Thr	Thr	Val	Asn	Val	Cys	Ser	Glu	Leu
				50					55					60
Val	Lys	Leu	Val	Phe	Cys	Val	Leu	Val	Ser	Phe	Cys	Val	Ile	Lys
				65					70					75
Lys	Asp	His	Gln	Ser	Arg	Asn	Leu	Lys	Tyr	Ala	Ser	Trp	Lys	Glu
				80					85					90
Phe	Ser	Asp	Phe	Met	Lys	Trp	Ser	Ile	Pro	Ala	Phe	Leu	Tyr	Phe
				95					100					105
Leu	Asp	Asn	Leu	Ile	Val	Phe	Tyr	Val	Leu	Ser	Tyr	Leu	Gln	Pro
				110					115					120

Ala Met Ala Val	Ile Phe Ser Asn Phe	Ser Ile Ile Thr Thr	Ala
	125	130	135
Leu Leu Phe Arg	Ile Val Leu Lys Arg	Arg Leu Asn Trp Ile	Gln
	140	145	150
Trp Ala Ser Leu	Leu Thr Leu Phe Leu	Ser Ile Val Ala Leu	Thr
	155	160	165
Ala Gly Thr Lys	Thr Leu Gln His Asn	Leu Ala Gly Arg Gly	Phe
	170	175	180
His His Asp Ala	Phe Phe Ser Pro Ser	Asn Ser Cys Leu Leu	Phe
	185	190	195
Arg Ser Glu Cys	Pro Arg Lys Asp Asn	Cys Thr Ala Lys Glu	Trp
	200	205	210
Thr Phe Pro Glu	Ala Lys Trp Asn Thr	Thr Ala Arg Val Phe	Ser
	215	220	225
His Ile Arg Leu	Gly Met Gly His Val	Leu Ile Ile Val Gln	Cys
	230	235	240
Phe Ile Ser Ser	Met Ala Asn Ile Tyr	Asn Glu Lys Ile Leu	Lys
	245	250	255
Glu Gly Asn Gln	Leu Thr Glu Ser Ile	Phe Ile Gln Asn Ser	Lys
	260	265	270
Leu Tyr Phe Phe	Gly Ile Leu Phe Asn	Gly Leu Thr Leu Gly	Leu
	275	280	285
Gln Arg Ser Asn	Arg Asp Gln Ile Lys	Asn Cys Gly Phe Phe	Tyr
	290	295	300
Gly His Ser Ala	Phe Ser Val Ala Leu	Ile Phe Val Thr Ala	Phe
	305	310	315
Gln Gly Leu Ser	Val Ala Phe Ile Leu	Lys Phe Leu Asp Asn	Met
	320	325	330
Phe His Val Leu	Met Ala Gln Val Thr	Thr Val Ile Ile Thr	Thr
	335	340	345
Val Ser Val Leu	Val Phe Asp Phe Arg	Pro Ser Leu Glu Phe	Phe
	350	355	360
Leu Glu Ala Pro	Ser Val Leu Leu Ser	Ile Phe Ile Tyr Asn	Ala
	365	370	375
Ser Lys Pro Gln	Val Pro Glu Tyr Ala	Pro Arg Gln Glu Arg	Ile
	380	385	390
Arg Asp Leu Ser	Gly Asn Leu Trp Glu	Arg Ser Ser Gly Asp	Gly
	395	400	405
Glu Glu Leu Glu	Arg Leu Thr Lys Pro	Lys Ser Asp Glu Ser	Asp
	410	415	420
Glu Asp Thr Phe			

<210> 15
<211> 755
<212> DNA
<213> Homo sapiens

<400> 15
cgtgcctgcg caatgggtgt cgggtccgct ttttccaat cgggacgtaa 50
tcgtgggtttt tgttctgcaa taggcggctt agagggaggg gctttttcgc 100
ctatacctac tgtagcttct ccacgtatgg accctaaagg ctactgctgc 150
tactacgggg ctagacagtt actgtctcag ctctaggatg tgcgttcttc 200
cactagaagc tcttctgagg gaggtaatga aaaaacagtg gaatggaaaa 250
acagtgctgt agtcatcctg taatatgtct cttgtcaaca atgtatacat 300
tcctgctagg tgccatattc attgctttta gctcaagtcg catcttacta 350
gtgaagtatt ctgccaatga agaaaacaag tatgattatc ttccaactac 400
tgtgaatgtg tgctcagaac tggatgaagc agttttctgt gtgcttgtgt 450
cattctgtgt tataaagaaa gatcatcaaa gtagaaattt gaaatatgct 500
tcctggaagg aattctctga tttcatgaag tggatcattc ctgcctttct 550
ttatttctctg gataacttga ttgtcttcta tgtcctgtcc tatcttcaac 600
cagccatggc tgttatcttc tcaaatttta gcattataac aacagctctt 650
ctattcagga tagtgctgaa gaggcgtcta aactggatcc agtgggcttc 700
cctcctgact ttatttttgt ctattgtggc cttgactgcc gggactaaaa 750
cttta 755

<210> 16
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 16
ctatacctac tgtagcttct 20

<210> 17
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 17
tcagagaatt ccttccagga 20

<210> 18
<211> 40
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 18

acagtgtctgt agtcatcctg taatatgtc cttgtcaaca 40

<210> 19

<211> 2142

<212> DNA

<213> Homo sapiens

<400> 19

cggacgcgtg ggcggacgcg tgggcggacg cgtggggcgc gcttggctag 50
cgcgcggcgg ccgtggctaa ggctgctacg aagcgagctt gggaggagca 100
gcggcctgcg gggcagagga gcatcccgtc taccaggtcc caagcggcgt 150
ggcccgcggg tcatggccaa aggagaaggc gccgagagcg gctccgcggc 200
ggggctgcta cccaccagca tcctccaaag cactgaacgc ccggcccagg 250
tgaagaaaga accgaaaaag aagaaacaac agttgtctgt ttgcaacaag 300
ctttgctatg cacttggggg agccccctac caggtgacgg gctgtgccct 350
gggtttcttc cttcagatct acctattgga tgtggctcag gtggggccctt 400
tctctgcctc catcatcctg tttgtgggcc gagcctggga tgccatcaca 450
gaccccctgg tgggcctctg catcagcaaa tccccctgga cctgcctggg 500
tcgccttatg ccctggatca tcttctccac gccctgggc gtcattgcct 550
acttctcat ctggttcgtg cccgaacttc cacacggcca gacctattgg 600
tacctgcttt tctattgcct ctttgaaaca atggtcacgt gtttccatgt 650
tcctactcg gctctacca tgttcatcag caaccgagca gactgagcgg 700
gattctgcca cgcctatcg gatgactgtg gaagtgotgg gcacagtgt 750
gggcacggcg atccaggac aaatcgtggg ccaagcagac acgccttggt 800
tccaggactt caatagctct acagtagctt caciaagtgc caaccataca 850
catggcacca cttcacacag ggaaacgcaa aaggcatacc tgctggcagc 900
gggggtcatt gtctgtatct atataatctg tgctgtcatc ctgatcctgg 950
gcgtgcggga gcagagagaa ccctatgaag ccagcagtc tgagccaatc 1000
gcctacttcc ggggcctacg gctggtcatg agccaaggcc catacatcaa 1050
acttattact ggcttctct tcaacctcctt ggctttcatg ctgggtggagg 1100
ggaactttgt cttgttttgc acctacacct tgggcttccg caatgaattc 1150
cagaatctac tcctggccat catgtctctg gccactttaa ccattcccat 1200
ctggcagtgg ttcttgacct ggtttggcaa gaagacagct gtatatgttg 1250

ggatctcatc agcagtgcc a tttctcatct tggtagccct catggagagt 1300
 aacctcatca ttacatatgc ggtagctgtg gcagctggca tcagtgtggc 1350
 agctgccttc ttactacct ggtccatgct gcctgatgtc attgacgact 1400
 tccatctgaa gcagccccac ttccatggaa ccgagcccat cttcttctcc 1450
 ttctatgtct tcttcaccaa gtttgcctct ggagtgtcac tgggcatttc 1500
 taccctcagt ctggactttg cagggtagca gaccctggc tgctcgcagc 1550
 cggaacgtgt caagtttaca ctgaacatgc tcgtgacat ggctccata 1600
 gttctcatcc tgctgggct gctgctctc aaaatgtacc ccattgatga 1650
 ggagaggcgg cggcagaata agaaggccct gcaggcactg agggacgagg 1700
 ccagcagctc tggctgtca gaaacagact ccacagagct ggctagcatc 1750
 ctctagggcc cgccacgttg cccgaagcca ccatgcagaa ggccacagaa 1800
 gggatcagga cctgtctgcc ggctgtgtga gcagctggac tgcaggtgct 1850
 aggaagggaa ctgaagactc aaggagggtg cccaggacac ttgctgtgct 1900
 cactgtgggg ccggctgtc tgtggcctcc tgccctccct ctgctgct 1950
 gtggggccaa gccctggggc tgccactgtg aatatgccaa ggactgatcg 2000
 ggcctagccc ggaacactaa ttagaaaacc ttttttttac agagccta 2050
 taataactta atgactgtgt acatagcaat gtgtgtgtat gtatatgtct 2100
 gtgagctatt aatgttatta attttcataa aagctggaaa gc 2142

<210> 20
 <211> 458
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Trp Leu Arg Trp Ala Leu Ser Leu Pro Pro Ser Ser Cys Leu
 1 5 10 15
 Trp Ala Glu Pro Gly Met Pro Ser Gln Thr Pro Trp Trp Ala Ser
 20 25 30
 Ala Ser Ala Asn Pro Pro Gly Pro Ala Trp Val Ala Leu Cys Pro
 35 40 45
 Gly Ser Ser Ser Pro Arg Pro Trp Pro Ser Leu Pro Thr Ser Ser
 50 55 60
 Ser Gly Ser Cys Pro Thr Ser His Thr Ala Arg Pro Ile Gly Thr
 65 70 75
 Cys Phe Ser Ile Ala Ser Leu Lys Gln Trp Ser Arg Val Ser Met
 80 85 90
 Phe Pro Thr Arg Leu Ser Pro Cys Ser Ser Ala Thr Glu Gln Thr
 95 100 105

Glu Arg Asp Ser	Ala Thr Ala Tyr Arg	Met Thr Val Glu Val Leu	110	115	120
Gly Thr Val Leu	Gly Thr Ala Ile Gln	Gly Gln Ile Val Gly Gln	125	130	135
Ala Asp Thr Pro	Cys Phe Gln Asp Phe	Asn Ser Ser Thr Val Ala	140	145	150
Ser Gln Ser Ala	Asn His Thr His Gly	Thr Thr Ser His Arg Glu	155	160	165
Thr Gln Lys Ala	Tyr Leu Leu Ala Ala	Gly Val Ile Val Cys Ile	170	175	180
Tyr Ile Ile Cys	Ala Val Ile Leu Ile	Leu Gly Val Arg Glu Gln	185	190	195
Arg Glu Pro Tyr	Glu Ala Gln Gln Ser	Glu Pro Ile Ala Tyr Phe	200	205	210
Arg Gly Leu Arg	Leu Val Met Ser His	Gly Pro Tyr Ile Lys Leu	215	220	225
Ile Thr Gly Phe	Leu Phe Thr Ser Leu	Ala Phe Met Leu Val Glu	230	235	240
Gly Asn Phe Val	Leu Phe Cys Thr Tyr	Thr Leu Gly Phe Arg Asn	245	250	255
Glu Phe Gln Asn	Leu Leu Leu Ala Ile	Met Leu Ser Ala Thr Leu	260	265	270
Thr Ile Pro Ile	Trp Gln Trp Phe Leu	Thr Arg Phe Gly Lys Lys	275	280	285
Thr Ala Val Tyr	Val Gly Ile Ser Ser	Ala Val Pro Phe Leu Ile	290	295	300
Leu Val Ala Leu	Met Glu Ser Asn Leu	Ile Ile Thr Tyr Ala Val	305	310	315
Ala Val Ala Ala	Gly Ile Ser Val Ala	Ala Ala Phe Leu Leu Pro	320	325	330
Trp Ser Met Leu	Pro Asp Val Ile Asp	Asp Phe His Leu Lys Gln	335	340	345
Pro His Phe His	Gly Thr Glu Pro Ile	Phe Phe Ser Phe Tyr Val	350	355	360
Phe Phe Thr Lys	Phe Ala Ser Gly Val	Ser Leu Gly Ile Ser Thr	365	370	375
Leu Ser Leu Asp	Phe Ala Gly Tyr Gln	Thr Arg Gly Cys Ser Gln	380	385	390
Pro Glu Arg Val	Lys Phe Thr Leu Asn	Met Leu Val Thr Met Ala	395	400	405
Pro Ile Val Leu	Ile Leu Leu Gly Leu	Leu Leu Phe Lys Met Tyr	410	415	420

Pro Ile Asp Glu Glu Arg Arg Arg Gln Asn Lys Lys Ala Leu Gln
425 430 435

Ala Leu Arg Asp Glu Ala Ser Ser Ser Gly Cys Ser Glu Thr Asp
440 445 450

Ser Thr Glu Leu Ala Ser Ile Leu
455

<210> 21
<211> 571
<212> DNA
<213> Homo sapiens

<400> 21
gggaaacgca aaaggcatac ctgctggcag cgggggtcat tgtctgtatc 50
tatataatct gtgctgtcat cctgacctg ggcgtgcggg agcagagaga 100
accctatgaa gccagcagt ctgagccaat cgcctacttc cggggcctac 150
ggctgggtcat gagccacggc ccatacatca aacttattac tggcttcctc 200
ttcacctcct tggctttcat gctgggtggag gggaaactttg tcttgttttg 250
cacctacacc ttgggcttcc gcaatgaatt ccagaatcta ctctggcca 300
tcatgctctc ggccacttta accattccca tctggcagtg gttcttgacc 350
cggtttggca agaagacagc tgtatatgtt gggatctcat cagcagtgcc 400
atttctcatc ttgggtggccc tcatggagag taacctcatc attacatatg 450
cggtagctgt ggcagctggc atcagtggtg cagctgcctt cttactaccc 500
tgggtccatgc tgcctgatgt cattgacgac ttccatctga agcagcccca 550
cttccatgga accgagccca t 571

<210> 22
<211> 1173
<212> DNA
<213> Homo sapiens

<400> 22
ggggcttcgg cgccagcggc cagcgctagt cgggtctggt aggatttaca 50
aaaggtgcag gtatgagcag gtctgaagac taacattttg tgaagttgta 100
aaacagaaaa cctgttagaa atgtggtggt ttcagcaagg cctcagtttc 150
cttccttcag cccttgtaat ttggacatct gotgctttca tattttcata 200
cattactgca gtaacactcc accatataga cccggcttta ccttatatca 250
gtgacactgg tacagtagct ccagaaaaat gcttatttgg ggcaatgcta 300
aatattgcyg cagttttatg cattgctacc atttatgttc gttataagca 350
agttcatgct ctgagtcctg aagagaacgt tatcatcaaa ttaaacaagg 400
ctggccttgt acttgggaata ctgagttggt taggactttc tattgtggca 450

aacttccaga aaacaaccct ttttgctgca catgtaagtg gagctgtgct 500
taccttttgggt atggggtcat tatatatgtt tgttcagacc atccttttct 550
accaaagtca gcccaaaatc catggcaaac aagtcttctg gatcagactg 600
ttgttggtta tctgggtgtg agtaagtgca cttagcatgc tgacttgctc 650
atcagttttg cacagtggca attttgggac tgatttagaa cagaaactcc 700
attggaaccc cgaggacaaa gggtatgtgc ttcacatgat cactactgca 750
gcagaatgggt ctatgtcatt ttccttcttt ggttttttcc tgacttacat 800
tcgtgatttt cagaaaatct ctttacgggt ggaagccaat ttacatggat 850
taaccctcta tgacactgca ccttgcccta ttaacaatga acgaacacgg 900
ctactttcca gagatatttg atgaaaggat aaaatatttc tgtaatgatt 950
atgattctca gggattgggg aaagggtcac agaagttgct tattcttctc 1000
tgaaattttc aaccacttaa tcaaggctga cagtaacact gatgaatgct 1050
gataatcagg aaacatgaaa gaagccattt gatagattat tctaaaggat 1100
atcatcaaga agactattaa aaacacctat gcctatactt ttttatctca 1150
gaaaataaag tcaaaagact atg 1173

<210> 23

<211> 266

<212> PRT

<213> Homo sapiens

<400> 23

Met	Trp	Trp	Phe	Gln	Gln	Gly	Leu	Ser	Phe	Leu	Pro	Ser	Ala	Leu
1				5					10					15
Val	Ile	Trp	Thr	Ser	Ala	Ala	Phe	Ile	Phe	Ser	Tyr	Ile	Thr	Ala
				20					25					30
Val	Thr	Leu	His	His	Ile	Asp	Pro	Ala	Leu	Pro	Tyr	Ile	Ser	Asp
				35					40					45
Thr	Gly	Thr	Val	Ala	Pro	Glu	Lys	Cys	Leu	Phe	Gly	Ala	Met	Leu
				50					55					60
Asn	Ile	Ala	Ala	Val	Leu	Cys	Ile	Ala	Thr	Ile	Tyr	Val	Arg	Tyr
				65					70					75
Lys	Gln	Val	His	Ala	Leu	Ser	Pro	Glu	Glu	Asn	Val	Ile	Ile	Lys
				80					85					90
Leu	Asn	Lys	Ala	Gly	Leu	Val	Leu	Gly	Ile	Leu	Ser	Cys	Leu	Gly
				95					100					105
Leu	Ser	Ile	Val	Ala	Asn	Phe	Gln	Lys	Thr	Thr	Leu	Phe	Ala	Ala
				110					115					120
His	Val	Ser	Gly	Ala	Val	Leu	Thr	Phe	Gly	Met	Gly	Ser	Leu	Tyr
				125					130					135

Met	Phe	Val	Gln	Thr	Ile	Leu	Ser	Tyr	Gln	Met	Gln	Pro	Lys	Ile	
				140					145					150	
His	Gly	Lys	Gln	Val	Phe	Trp	Ile	Arg	Leu	Leu	Leu	Val	Ile	Trp	
				155					160					165	
Cys	Gly	Val	Ser	Ala	Leu	Ser	Met	Leu	Thr	Cys	Ser	Ser	Val	Leu	
				170					175					180	
His	Ser	Gly	Asn	Phe	Gly	Thr	Asp	Leu	Glu	Gln	Lys	Leu	His	Trp	
				185					190					195	
Asn	Pro	Glu	Asp	Lys	Gly	Tyr	Val	Leu	His	Met	Ile	Thr	Thr	Ala	
				200					205					210	
Ala	Glu	Trp	Ser	Met	Ser	Phe	Ser	Phe	Phe	Gly	Phe	Phe	Leu	Thr	
				215					220					225	
Tyr	Ile	Arg	Asp	Phe	Gln	Lys	Ile	Ser	Leu	Arg	Val	Glu	Ala	Asn	
				230					235					240	
Leu	His	Gly	Leu	Thr	Leu	Tyr	Asp	Thr	Ala	Pro	Cys	Pro	Ile	Asn	
				245					250					255	
Asn	Glu	Arg	Thr	Arg	Leu	Leu	Ser	Arg	Asp	Ile					
				260					265						

<210> 24
 <211> 485
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 14, 484
 <223> unknown base

<400> 24
 cggacgcttg ggcnegccca gcggccagcg ctagtccggtc tggtaagtgc 50
 ctgatgccga gttccgtctc tcgggtcttt tcttggtccc aggcaaagcg 100
 gagcggagat cctcaaacgg cctagtgttt cgcgcttccg gagaaaatca 150
 gcggtctaataaattcctct ggtttgttga agcagttacc aagaatcttc 200
 aaccctttcc cacaaaagct aattgagtac acgttctctgt tgagtacacg 250
 ttcctgttga ttacaaaaag gtgcaggtat gagcaggtct gaagactaac 300
 attttgtgaa gttgtaaaac agaaaacctg ttagaaatgt ggtgggtttca 350
 gcaaggcctc agtttccttc cttcagccct tgtaatttgg acatctgctg 400
 ctttcatatt ttcatacatt actgcagtaa cactccacca tatagaccgg 450
 gctttacctt atatcagtga cactggtaca gtanc 485

<210> 25
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 25
acctgttaga aatgtggtgg tttcagcaag gcctcagttt 40

<210> 26
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
ggagatagct gctatgggtt cttcaggcac aacttaacat gggaag 46

<210> 27
<211> 1399
<212> DNA
<213> Homo sapiens

<400> 27
cccacgcgtc cgcccgccgc tgcgtcccgg agtgcaagtg agcttctcgg 50
ctgccccgcg ggccgggggtg cggagccgac atgcgcccgc ttctcggcct 100
ccttctggtc ttgcgcggct gcaccttcgc cttgtacttg ctgtcgacgc 150
gactgccccg cgggcggaga ctgggctcca ccgaggaggc tggaggcagg 200
tcgctgtggt tcccctccga cctggcagag ctgcgggagc tctctgaggt 250
ccttcgagag taccggaagg agcaccaggc ctacgtgttc ctgctcttct 300
gcggcgccta cctctacaaa cagggttttg ccatccccgg ctccagcttc 350
ctgaatgttt tagctggtgc cttgtttggg ccatggctgg ggcttctgct 400
gtgctgtgtg ttgacctcgg tgggtgccac atgctgttac ctgctctcca 450
gtatttttgg caaacagtgt gtggtgtcct actttcctga taaagtggcc 500
ctgctgcaga gaaaggtgga ggagaacaga aacagcttgt ttttttctt 550
attgtttttg agacttttcc ccatgacacc aaactggttc ttgaacctct 600
cggccccaat tctgaacatt cccatogtgc agttcttctt ctcagttctt 650
atcggtttga tccatataa ttcatctgt gtgcagacag ggtccatcct 700
gtcaacccta acctctctgg atgctctttt ctctgggac actgtcttta 750
agctgttggc cattgccatg gtggcattaa ttcttgaac cctcattaaa 800
aaatttagtc agaaacatct gcaattgaat gaaacaagta ctgctaata 850
tatacacagt agaaaagaca catgatctgg attttctgtt tgccacatcc 900
ctggactcag ttgcttattt gtgtaatgga tgtggtcctc taaagcccct 950
cattgttttt gattgccttc tataggatgat gtggacactg tgcataatg 1000

tgcagtgtct tttcagaaag gacactctgc tcttgaaggt gtattacatc 1050
 aggtttttcaa accagccctg gtgtagcaga cactgcaaca gatgcctcct 1100
 agaaaatgct gtttgtggcc gggcgcggtg gctcacgcct gtaatcccag 1150
 cactttggga ggccgaggcc ggtgattcac aaggtcagga gttcaagacc 1200
 agcctggcca agatggtgaa atcctgtctc taataaaaat acaaaaatta 1250
 gccaggcgtg gtggcaggca cctgtaatcc cagctactcg ggaggctgag 1300
 gcaggagaat tgcttgaacc aaggtggcag aggttgagcgt aagccaagat 1350
 cacaccactg cactccagcc tgggtgatag agtgagacac tgtcttgac 1399

<210> 28

<211> 264

<212> PRT

<213> Homo sapiens

<400> 28

Met	Arg	Pro	Leu	Leu	Gly	Leu	Leu	Leu	Val	Phe	Ala	Gly	Cys	Thr	1	5	10	15
Phe	Ala	Leu	Tyr	Leu	Leu	Ser	Thr	Arg	Leu	Pro	Arg	Gly	Arg	Arg	20	25	30	
Leu	Gly	Ser	Thr	Glu	Glu	Ala	Gly	Gly	Arg	Ser	Leu	Trp	Phe	Pro	35	40	45	
Ser	Asp	Leu	Ala	Glu	Leu	Arg	Glu	Leu	Ser	Glu	Val	Leu	Arg	Glu	50	55	60	
Tyr	Arg	Lys	Glu	His	Gln	Ala	Tyr	Val	Phe	Leu	Leu	Phe	Cys	Gly	65	70	75	
Ala	Tyr	Leu	Tyr	Lys	Gln	Gly	Phe	Ala	Ile	Pro	Gly	Ser	Ser	Phe	80	85	90	
Leu	Asn	Val	Leu	Ala	Gly	Ala	Leu	Phe	Gly	Pro	Trp	Leu	Gly	Leu	95	100	105	
Leu	Leu	Cys	Cys	Val	Leu	Thr	Ser	Val	Gly	Ala	Thr	Cys	Cys	Tyr	110	115	120	
Leu	Leu	Ser	Ser	Ile	Phe	Gly	Lys	Gln	Leu	Val	Val	Ser	Tyr	Phe	125	130	135	
Pro	Asp	Lys	Val	Ala	Leu	Leu	Gln	Arg	Lys	Val	Glu	Glu	Asn	Arg	140	145	150	
Asn	Ser	Leu	Phe	Phe	Phe	Leu	Leu	Phe	Leu	Arg	Leu	Phe	Pro	Met	155	160	165	
Thr	Pro	Asn	Trp	Phe	Leu	Asn	Leu	Ser	Ala	Pro	Ile	Leu	Asn	Ile	170	175	180	
Pro	Ile	Val	Gln	Phe	Phe	Phe	Ser	Val	Leu	Ile	Gly	Leu	Ile	Pro	185	190	195	
Tyr	Asn	Phe	Ile	Cys	Val	Gln	Thr	Gly	Ser	Ile	Leu	Ser	Thr	Leu	200	205	210	

Thr	Ser	Leu	Asp	Ala	Leu	Phe	Ser	Trp	Asp	Thr	Val	Phe	Lys	Leu
				215					220					225
Leu	Ala	Ile	Ala	Met	Val	Ala	Leu	Ile	Pro	Gly	Thr	Leu	Ile	Lys
				230					235					240
Lys	Phe	Ser	Gln	Lys	His	Leu	Gln	Leu	Asn	Glu	Thr	Ser	Thr	Ala
				245					250					255
Asn	His	Ile	His	Ser	Arg	Lys	Asp	Thr						
				260										

<210> 29

<211> 1292

<212> DNA

<213> Homo sapiens

<400> 29

```

ccgaggcggg aggagcccgaggagggcgcgga gccccgcatg aatcattgta 50
gtcaatcatt ttccagttct cagccgctca gttgtgatca agggacacgt 100
ggtttccgaa ctgccagctc agaataggaa aataacttgg gattttatat 150
tggaagacat ggatcttgct gccaacgaga tcagcattta tgacaaactt 200
tcagagactg ttgatttggg gagacagacc ggccatcagt gtggcatgtc 250
agagaaggca attgaaaaat ttatcagaca gctgctggaa aagaatgaac 300
ctcagagacc cccccgcag tatcctctcc ttatagttgt gtataagggt 350
ctcgcaacct tgggattaat cttgctcact gcctactttg tgattcaacc 400
tttcagccca ttagcacctg agccagtgtt ttctggagct cacacctggc 450
gctcactcat ccatcacatt aggctgatgt ccttgcccat tgccaagaag 500
tacatgtcag aaaataaggg agttcctctg catgggggtg atgaagacag 550
accctttcca gactttgacc cctggtggac aaacgactgt gaggagaatg 600
agtcagagcc cattcctgcc aactgcactg gctgtgcca gaaacacctg 650
aaggtgatgc tcctggaaga cgcccaagg aaatttgaga ggctccatcc 700
actggtgatc aagacgggaa agcccctgtt ggaggaagag attcagcatt 750
ttttgtgcca gtaccctgag gcgacagaag gcttctctga agggtttttc 800
gccaagtggg ggcgtgctt tcctgagcgg tggttcccat ttccttatcc 850
atggaggaga cctctgaaca gatcacaaat gttacgtgag ctttttctg 900
ttttcactca cctgccattt ccaaaagatg cctctttaaa caagtgtctc 950
tttcttcacc cagaacctgt tgtggggagt aagatgcata agatgcctga 1000
cctatttatc attggcagcg gtgaggccat gttgcagctc atccctccct 1050
tccagtgccg aagacattgt cagtctgtgg ccatgccaat agagccaggg 1100
gatatcggt atgtcgacac caccactgg aaggtctacg ttatagccag 1150

```

aggggtccag cctttgtca tctgcatgg aaccgtttc tcagaactgt 1200
 aggaaataga actgtgcaca ggaacagctt ccagagcoga aaaccaggtt 1250
 gaaaggggaa aaataaaaaac aaaaacgatg aaactgcaaa aa 1292

<210> 30
 <211> 347
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Asp Leu Ala Ala Asn Glu Ile Ser Ile Tyr Asp Lys Leu Ser
 1 5 10 15
 Glu Thr Val Asp Leu Val Arg Gln Thr Gly His Gln Cys Gly Met
 20 25 30
 Ser Glu Lys Ala Ile Glu Lys Phe Ile Arg Gln Leu Leu Glu Lys
 35 40 45
 Asn Glu Pro Gln Arg Pro Pro Pro Gln Tyr Pro Leu Leu Ile Val
 50 55 60
 Val Tyr Lys Val Leu Ala Thr Leu Gly Leu Ile Leu Leu Thr Ala
 65 70 75
 Tyr Phe Val Ile Gln Pro Phe Ser Pro Leu Ala Pro Glu Pro Val
 80 85 90
 Leu Ser Gly Ala His Thr Trp Arg Ser Leu Ile His His Ile Arg
 95 100 105
 Leu Met Ser Leu Pro Ile Ala Lys Lys Tyr Met Ser Glu Asn Lys
 110 115 120
 Gly Val Pro Leu His Gly Gly Asp Glu Asp Arg Pro Phe Pro Asp
 125 130 135
 Phe Asp Pro Trp Trp Thr Asn Asp Cys Glu Gln Asn Glu Ser Glu
 140 145 150
 Pro Ile Pro Ala Asn Cys Thr Gly Cys Ala Gln Lys His Leu Lys
 155 160 165
 Val Met Leu Leu Glu Asp Ala Pro Arg Lys Phe Glu Arg Leu His
 170 175 180
 Pro Leu Val Ile Lys Thr Gly Lys Pro Leu Leu Glu Glu Glu Ile
 185 190 195
 Gln His Phe Leu Cys Gln Tyr Pro Glu Ala Thr Glu Gly Phe Ser
 200 205 210
 Glu Gly Phe Phe Ala Lys Trp Trp Arg Cys Phe Pro Glu Arg Trp
 215 220 225
 Phe Pro Phe Pro Tyr Pro Trp Arg Arg Pro Leu Asn Arg Ser Gln
 230 235 240
 Met Leu Arg Glu Leu Phe Pro Val Phe Thr His Leu Pro Phe Pro
 245 250 255

Lys Asp Ala Ser Leu Asn Lys Cys Ser Phe Leu His Pro Glu Pro
 260 265 270
 Val Val Gly Ser Lys Met His Lys Met Pro Asp Leu Phe Ile Ile
 275 280 285
 Gly Ser Gly Glu Ala Met Leu Gln Leu Ile Pro Pro Phe Gln Cys
 290 295 300
 Arg Arg His Cys Gln Ser Val Ala Met Pro Ile Glu Pro Gly Asp
 305 310 315
 Ile Gly Tyr Val Asp Thr Thr His Trp Lys Val Tyr Val Ile Ala
 320 325 330
 Arg Gly Val Gln Pro Leu Val Ile Cys Asp Gly Thr Ala Phe Ser
 335 340 345
 Glu Leu

<210> 31
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 31
 ccacggtgtc cgttcttcgc ccggcggcag ctgtccccga ggcgggagga 50
 gcccgagggg cgcgagcccc gcatgaatca ttgtagtcaa tcattttcca 100
 gttctcagcc gttcagttgt gatcaaggga cacgtggttt ccgaactgcc 150
 agtcagaat aggaaaataa cttgggattt tatattggaa gacatggatc 200
 ttgctgccaa cgagatcagc atttatgaca aactttcaga gactgttgat 250
 ttggtgagac agaccggcca tcagtgtggc atgtcagaga aggcaattga 300
 aaaatttatc agacagctgc tggaaaagaa tgaacctcag agaccccccc 350
 cgcagtatcc tctccttata gttgtgtata aggttctcgc aaccttgga 400
 ttaatcttgc tcaactgcta ctttgtgatt caacctttca gcccattagc 450
 acctgagcca gtgctttgtg gagctcac 478

<210> 32
 <211> 3531
 <212> DNA
 <213> Homo sapiens

<400> 32
 cccacgcgtc cgcccacgcg tccggctgaa cacctcttct ttggagtcag 50
 ccaactgatga ggcaggggtcc ccaacttcag ctgcagcagc tgcagcagct 100
 gcagagcgct gctcctggct ggtgccactg gtgcgcacgc tgctagaccg 150
 tgcctatgag ccgctggggc tgcagtgggg actgccctcc ctgccacca 200
 ccaatggcag cccaccttc tttgaagact tccaggcttt ttgtgccaca 250

cccgaatggc gccacttcat cgacaaacag gtacagccaa ccatgtccca 300
 gttcgaaatg gacacgtatg ctaagagcca cgaccttatg tcaggtttct 350
 ggaatgcctg ctatgacatg cttatgagca gtgggcagcg gcgccagtgg 400
 gagcgcgccc agagtcgtcg ggccttccag gagctggtgc tggaacctgc 450
 gcagaggcgg gcgcgcctgg aggggctacg ctacaaggca gtgctgaagc 500
 agcaggcaac gcagcactcc atggccctgc tgcactgggg ggcgctgtgg 550
 cgccagctcg ccagcccatg tggggcctgg gcgctgaggg aactcccat 600
 ccccgctgg aaactgtcca gcgccgagac atattcaagc atgcgtctga 650
 agctggtgcc caaccatcac ttcgaccctc acctggaagc cagcgtcttc 700
 cgagacaatc tgggtgaggt tccctgaca cccaccgagg aggcctcact 750
 gcctctggca gtgaccaaag aggccaaagt gagcaccoca cccgagttgc 800
 tgcaggagga ccagctcggc gaggacgagc tggctgagct ggagaccccg 850
 atggaggcag cagaactgga tgagcagcgt gagaagctgg tgctgtcggc 900
 cgagtgccag ctggtgacgg tagtggccgt ggtcccaggg ctgctggagg 950
 tcaccacaca gaatgtatac ttctacgatg gcagcactga gcgcgtggaa 1000
 accgaggagg gcacggtcta tgatttccgg cgccactgg cccagctgcg 1050
 tgaggccac ctgcggcgtt tcaacctgcg ccgttcagca cttgagctct 1100
 tctttatcga tcaggccaac tacttctca acttcccatg caaggtgggc 1150
 acgacccag tctcatctcc tagccagact ccgagacccc agcctggccc 1200
 catcccacc cataccagg tacggaacca ggtgtactcg tggctcctgc 1250
 gcctacggcc cccctctcaa ggctacctaa gcagccgctc ccccaggag 1300
 atgctgcgtg cctcaggcct taccagaaa tgggtacagc gtgagatata 1350
 caacttcgag tacttgatgc aactcaacac cattgcgggg cggacctaca 1400
 atgacctgtc tcagtacct gtgttccctt gggctcctga ggactacgtg 1450
 tccccaacct tggacctcag caaccagacc gtcttccggg acctgtctaa 1500
 gccatcgggt gtggtgaacc ccaagcatgc ccagctcgtg agggagaagt 1550
 atgaaagctt tgaggacca gcagggacca ttgacaagtt ccactatggc 1600
 acccactact ccaatgcagc aggcgtgatg cactacctca tccgcgtgga 1650
 gcccttcacc tccctgcacg tccagctgca aagtggcgcg tttgactgct 1700
 ccgaccggca gttccactcg gtggcggcag cctggcaggc acgcctggag 1750
 agccctgccg atgtgaagga gctcatcccg gaattcttct actttcctga 1800
 cttcctggag aaccagaacg gttttgacct gggctgtctc cagctgacca 1850

acgagaaggt aggcgatgtg gtgctacccc cgtgggccag ctctcctgag 1900
 gacttcatcc agcagcaccg ccaggctctg gagtcggagt atgtgtctgc 1950
 acacctacac gaggggatcg acctcatctt tggctacaag cagcgggggc 2000
 cagccgccga ggaggccctc aatgtcttct attactgcac ctatgagggg 2050
 gctgtagacc tggaccatgt gacagatgag cgggaacgga aggctctgga 2100
 gggcattatc agcaactttg ggcagactcc ctgtcagctg ctgaaggagc 2150
 cacatccaac tcggctctca gctgaggaag cagcccatcg ccttgcacgc 2200
 ctggacacta actcacctag catcttccag cacctggacg aactcaaggc 2250
 attcttcgca gaggtgactg tgagtgccag tgggctgctg ggcacccaca 2300
 gctggttgcc ctatgaccgc aacataagca actacttcag cttcagcaaa 2350
 gaccccacca tgggcagcca caagacgcag cgactgctga gtggcccgtg 2400
 ggtgccaggc agtgggtgtg gtggacaagc actggcagtg gccccgatg 2450
 gaaagctgct attcagcggg ggccactggg atggcagcct gcgggtgact 2500
 gcactacccc gtggcaagct gttgagccag ctcagctgcc accttgatgt 2550
 agtaacctgc cttgcaactg acacctgtgg catctacctc atctcaggct 2600
 cccgggacac cacgtgcatg gtgtggcggc tcctgcatca ggggtggtctg 2650
 tcagtaggcc tggcaccaaa gcctgtgcag gtcctgtatg ggcatggggc 2700
 tgcagtgagc tgtgtggcca tcagcactga acttgacatg gctgtgtctg 2750
 gatctgagga tggaaactgt atcatacaca ctgtacgccg cggacagttt 2800
 gtagcggcac taaggcctct gggtgccaca ttccctggac ctattttcca 2850
 cctggcattg ggggtccgaag gccagattgt ggtacagagc tcagcgtggg 2900
 aacgtcctgg ggcccaggtc acctactcct tgcacctgta ttcagtcaat 2950
 gggaagtgtc gggcttccact gccctggca gagcagccta cagccctgac 3000
 ggtgacagag gactttgtgt tgctgggcac cgcccagtgc gccctgcaca 3050
 tcctccaaact aaacacactg ctcccggccg cgctccctt gcccatgaag 3100
 gtggccatcc gcagcgtggc cgtgaccaag gagcgagcc acgtgctggt 3150
 gggcctggag gatggcaagc tcatcgtggt ggtcgcgggg cagccctctg 3200
 aggtgcgcag cagccagttc gcgcggaagc tgtggcggtc ctcgcggcgc 3250
 atctcccagg tgtcctcggg agagacggaa tacaacccta ctgaggcgcg 3300
 ctgaacctgg ccagtcgggc tgctcgggcc ccgccccggg caggcctggc 3350
 ccgggaggcc ccgccagaa gtcggcgga acaccccggg gtgggcagcc 3400
 cagggggtga gcggggccca ccctgccag ctcagggtt ggcgggcgat 3450

gttaccacct cagggattgg cgggcggaag tcccgcacct cgccggctga 3500

ggggccgccc tgaggccag cactggcgtc t 3531

<210> 33

<211> 1003

<212> PRT

<213> Homo sapiens

<400> 33

Met	Ser	Gln	Phe	Glu	Met	Asp	Thr	Tyr	Ala	Lys	Ser	His	Asp	Leu
1				5					10					15

Met	Ser	Gly	Phe	Trp	Asn	Ala	Cys	Tyr	Asp	Met	Leu	Met	Ser	Ser
				20					25					30

Gly	Gln	Arg	Arg	Gln	Trp	Glu	Arg	Ala	Gln	Ser	Arg	Arg	Ala	Phe
				35					40					45

Gln	Glu	Leu	Val	Leu	Glu	Pro	Ala	Gln	Arg	Arg	Ala	Arg	Leu	Glu
				50					55					60

Gly	Leu	Arg	Tyr	Thr	Ala	Val	Leu	Lys	Gln	Gln	Ala	Thr	Gln	His
				65					70					75

Ser	Met	Ala	Leu	Leu	His	Trp	Gly	Ala	Leu	Trp	Arg	Gln	Leu	Ala
				80					85					90

Ser	Pro	Cys	Gly	Ala	Trp	Ala	Leu	Arg	Asp	Thr	Pro	Ile	Pro	Arg
				95					100					105

Trp	Lys	Leu	Ser	Ser	Ala	Glu	Thr	Tyr	Ser	Arg	Met	Arg	Leu	Lys
				110					115					120

Leu	Val	Pro	Asn	His	His	Phe	Asp	Pro	His	Leu	Glu	Ala	Ser	Ala
				125					130					135

Leu	Arg	Asp	Asn	Leu	Gly	Glu	Val	Pro	Leu	Thr	Pro	Thr	Glu	Glu
				140					145					150

Ala	Ser	Leu	Pro	Leu	Ala	Val	Thr	Lys	Glu	Ala	Lys	Val	Ser	Thr
				155					160					165

Pro	Pro	Glu	Leu	Leu	Gln	Glu	Asp	Gln	Leu	Gly	Glu	Asp	Glu	Leu
				170					175					180

Ala	Glu	Leu	Glu	Thr	Pro	Met	Glu	Ala	Ala	Glu	Leu	Asp	Glu	Gln
				185					190					195

Arg	Glu	Lys	Leu	Val	Leu	Ser	Ala	Glu	Cys	Gln	Leu	Val	Thr	Val
				200					205					210

Val	Ala	Val	Val	Pro	Gly	Leu	Leu	Glu	Val	Thr	Thr	Gln	Asn	Val
				215					220					225

Tyr	Phe	Tyr	Asp	Gly	Ser	Thr	Glu	Arg	Val	Glu	Thr	Glu	Glu	Gly
				230					235					240

Ile	Gly	Tyr	Asp	Phe	Arg	Arg	Pro	Leu	Ala	Gln	Leu	Arg	Glu	Val
				245					250					255

His	Leu	Arg	Arg	Phe	Asn	Leu	Arg	Arg	Ser	Ala	Leu	Glu	Leu	Phe
				260					265					270

Phe	Ile	Asp	Gln	Ala	Asn	Tyr	Phe	Leu	Asn	Phe	Pro	Cys	Lys	Val	
				275					280					285	
Gly	Thr	Thr	Pro	Val	Ser	Ser	Pro	Ser	Gln	Thr	Pro	Arg	Pro	Gln	
				290					295					300	
Pro	Gly	Pro	Ile	Pro	Pro	His	Thr	Gln	Val	Arg	Asn	Gln	Val	Tyr	
				305					310					315	
Ser	Trp	Leu	Leu	Arg	Leu	Arg	Pro	Pro	Ser	Gln	Gly	Tyr	Leu	Ser	
				320					325					330	
Ser	Arg	Ser	Pro	Gln	Glu	Met	Leu	Arg	Ala	Ser	Gly	Leu	Thr	Gln	
				335					340					345	
Lys	Trp	Val	Gln	Arg	Glu	Ile	Ser	Asn	Phe	Glu	Tyr	Leu	Met	Gln	
				350					355					360	
Leu	Asn	Thr	Ile	Ala	Gly	Arg	Thr	Tyr	Asn	Asp	Leu	Ser	Gln	Tyr	
				365					370					375	
Pro	Val	Phe	Pro	Trp	Val	Leu	Gln	Asp	Tyr	Val	Ser	Pro	Thr	Leu	
				380					385					390	
Asp	Leu	Ser	Asn	Pro	Ala	Val	Phe	Arg	Asp	Leu	Ser	Lys	Pro	Ile	
				395					400					405	
Gly	Val	Val	Asn	Pro	Lys	His	Ala	Gln	Leu	Val	Arg	Glu	Lys	Tyr	
				410					415					420	
Glu	Ser	Phe	Glu	Asp	Pro	Ala	Gly	Thr	Ile	Asp	Lys	Phe	His	Tyr	
				425					430					435	
Gly	Thr	His	Tyr	Ser	Asn	Ala	Ala	Gly	Val	Met	His	Tyr	Leu	Ile	
				440					445					450	
Arg	Val	Glu	Pro	Phe	Thr	Ser	Leu	His	Val	Gln	Leu	Gln	Ser	Gly	
				455					460					465	
Arg	Phe	Asp	Cys	Ser	Asp	Arg	Gln	Phe	His	Ser	Val	Ala	Ala	Ala	
				470					475					480	
Trp	Gln	Ala	Arg	Leu	Glu	Ser	Pro	Ala	Asp	Val	Lys	Glu	Leu	Ile	
				485					490					495	
Pro	Glu	Phe	Phe	Tyr	Phe	Pro	Asp	Phe	Leu	Glu	Asn	Gln	Asn	Gly	
				500					505					510	
Phe	Asp	Leu	Gly	Cys	Leu	Gln	Leu	Thr	Asn	Glu	Lys	Val	Gly	Asp	
				515					520					525	
Val	Val	Leu	Pro	Pro	Trp	Ala	Ser	Ser	Pro	Glu	Asp	Phe	Ile	Gln	
				530					535					540	
Gln	His	Arg	Gln	Ala	Leu	Glu	Ser	Glu	Tyr	Val	Ser	Ala	His	Leu	
				545					550					555	
His	Glu	Trp	Ile	Asp	Leu	Ile	Phe	Gly	Tyr	Lys	Gln	Arg	Gly	Pro	
				560					565					570	
Ala	Ala	Glu	Glu	Ala	Leu	Asn	Val	Phe	Tyr	Tyr	Cys	Thr	Tyr	Glu	
				575					580					585	

Gly	Ala	Val	Asp	Leu	Asp	His	Val	Thr	Asp	Glu	Arg	Glu	Arg	Lys	590	595	600
Ala	Leu	Glu	Gly	Ile	Ile	Ser	Asn	Phe	Gly	Gln	Thr	Pro	Cys	Gln	605	610	615
Leu	Leu	Lys	Glu	Pro	His	Pro	Thr	Arg	Leu	Ser	Ala	Glu	Glu	Ala	620	625	630
Ala	His	Arg	Leu	Ala	Arg	Leu	Asp	Thr	Asn	Ser	Pro	Ser	Ile	Phe	635	640	645
Gln	His	Leu	Asp	Glu	Leu	Lys	Ala	Phe	Phe	Ala	Glu	Val	Thr	Val	650	655	660
Ser	Ala	Ser	Gly	Leu	Leu	Gly	Thr	His	Ser	Trp	Leu	Pro	Tyr	Asp	665	670	675
Arg	Asn	Ile	Ser	Asn	Tyr	Phe	Ser	Phe	Ser	Lys	Asp	Pro	Thr	Met	680	685	690
Gly	Ser	His	Lys	Thr	Gln	Arg	Leu	Leu	Ser	Gly	Pro	Trp	Val	Pro	695	700	705
Gly	Ser	Gly	Val	Ser	Gly	Gln	Ala	Leu	Ala	Val	Ala	Pro	Asp	Gly	710	715	720
Lys	Leu	Leu	Phe	Ser	Gly	Gly	His	Trp	Asp	Gly	Ser	Leu	Arg	Val	725	730	735
Thr	Ala	Leu	Pro	Arg	Gly	Lys	Leu	Leu	Ser	Gln	Leu	Ser	Cys	His	740	745	750
Leu	Asp	Val	Val	Thr	Cys	Leu	Ala	Leu	Asp	Thr	Cys	Gly	Ile	Tyr	755	760	765
Leu	Ile	Ser	Gly	Ser	Arg	Asp	Thr	Thr	Cys	Met	Val	Trp	Arg	Leu	770	775	780
Leu	His	Gln	Gly	Gly	Leu	Ser	Val	Gly	Leu	Ala	Pro	Lys	Pro	Val	785	790	795
Gln	Val	Leu	Tyr	Gly	His	Gly	Ala	Ala	Val	Ser	Cys	Val	Ala	Ile	800	805	810
Ser	Thr	Glu	Leu	Asp	Met	Ala	Val	Ser	Gly	Ser	Glu	Asp	Gly	Thr	815	820	825
Val	Ile	Ile	His	Thr	Val	Arg	Arg	Gly	Gln	Phe	Val	Ala	Ala	Leu	830	835	840
Arg	Pro	Leu	Gly	Ala	Thr	Phe	Pro	Gly	Pro	Ile	Phe	His	Leu	Ala	845	850	855
Leu	Gly	Ser	Glu	Gly	Gln	Ile	Val	Val	Gln	Ser	Ser	Ala	Trp	Glu	860	865	870
Arg	Pro	Gly	Ala	Gln	Val	Thr	Tyr	Ser	Leu	His	Leu	Tyr	Ser	Val	875	880	885
Asn	Gly	Lys	Leu	Arg	Ala	Ser	Leu	Pro	Leu	Ala	Glu	Gln	Pro	Thr	890	895	900

Ala	Leu	Thr	Val	Thr	Glu	Asp	Phe	Val	Leu	Leu	Gly	Thr	Ala	Gln
				905					910					915
Cys	Ala	Leu	His	Ile	Leu	Gln	Leu	Asn	Thr	Leu	Leu	Pro	Ala	Ala
				920					925					930
Pro	Pro	Leu	Pro	Met	Lys	Val	Ala	Ile	Arg	Ser	Val	Ala	Val	Thr
				935					940					945
Lys	Glu	Arg	Ser	His	Val	Leu	Val	Gly	Leu	Glu	Asp	Gly	Lys	Leu
				950					955					960
Ile	Val	Val	Val	Ala	Gly	Gln	Pro	Ser	Glu	Val	Arg	Ser	Ser	Gln
				965					970					975
Phe	Ala	Arg	Lys	Leu	Trp	Arg	Ser	Ser	Arg	Arg	Ile	Ser	Gln	Val
				980					985					990
Ser	Ser	Gly	Glu	Thr	Glu	Tyr	Asn	Pro	Thr	Glu	Ala	Arg		
				995					1000					

<210> 34

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

tgactgcact acccgtggc aagctgttga gccagctcag ctg 43

<210> 35

<211> 1395

<212> DNA

<213> Homo sapiens

<400> 35

cggacgcgtg ggcggacgcg tgggggctgt gagaaagtgc caataaatac 50
atcatgcaac cccacggccc accttgtgaa ctctctgtgc ccagggctga 100
tgtgctgtt ccagggctac tcatocaaag gcctaatacca acgttctgtc 150
ttcaatctgc aaatctatgg ggtcctgggg ctcttctgga cccttaactg 200
ggtactggcc ctgggccaat gcgtcctcgc tggagccttt gcctccttct 250
actgggcctt ccacaagccc caggacatcc ctaccttccc cttaatctct 300
gccttcatcc gcacactcog ttaccacact gggtcattgg catttgagc 350
cctcatcctg acccttgtgc agatagcccg ggtcatcttg gagtatattg 400
accacaagct cagaggagtg cagaaccctg tagcccgtg catcatgtgc 450
tgtttcaagt gctgcctctg gtgtctggaa aaatttatca agttcctaaa 500
ccgcaatgca tacatcatga tcgccatcta cggaagaat ttctgtgtct 550
cagccaaaaa tgcgttcatg ctactcatgc gaaacattgt cagggtggtc 600
gtcctggaca aagtcacaga cctgctgctg ttctttggga agctgctggt 650

ggtcggaggc gtgggggtcc tgtccttctt ttttttctcc ggtcgcatcc 700
 cggggctggg taaagacttt aagagcccc acctcaacta ttactggctg 750
 cccatcatga cctccatcct gggggcctat gtcacgcca gcggcttctt 800
 cagcgttttc ggcatgtgtg tggacacgct cttcctctgc ttcctggaag 850
 acctggagcg gaacaacggc tccctggacc ggccctacta catgtccaag 900
 agccttctaa agattctggg caagaagaac gaggcgcccc cggacaacaa 950
 gaagaggaag aagtgcacgc tccggccctg atccaggact gcaccccacc 1000
 cccaccgtcc agccatccaa cctcacttcg ccttacaggt ctccattttg 1050
 tggtaaaaaa aggttttagg ccaggcgccg tggctcacgc ctgtaatcca 1100
 acactttgag aggctgaggc gggcggatca cctgagtcag gagttcgaga 1150
 ccagcctggc caacatggtg aaacctccgt ctctattaaa aatacaaaaa 1200
 tttagccgaga gtggtggcat gcacctgtca tcccagctac tcgggagggt 1250
 gaggcaggag aatcgcttga acccgggagg cagaggttgc agtgagccga 1300
 gatcgcgcca ctgcactcca acctgggtga cagactctgt ctccaaaaca 1350
 aaacaaacaa acaaaaagat tttattaaag atattttgtt aactc 1395

<210> 36
 <211> 321
 <212> PRT
 <213> Homo sapiens

<400> 36
 Arg Thr Arg Gly Arg Thr Arg Gly Gly Cys Glu Lys Val Pro Ile
 1 5 10 15
 Asn Thr Ser Cys Asn Pro Thr Ala His Leu Val Asn Ser Ser Cys
 20 25 30
 Pro Gly Leu Met Cys Val Phe Gln Gly Tyr Ser Ser Lys Gly Leu
 35 40 45
 Ile Gln Arg Ser Val Phe Asn Leu Gln Ile Tyr Gly Val Leu Gly
 50 55 60
 Leu Phe Trp Thr Leu Asn Trp Val Leu Ala Leu Gly Gln Cys Val
 65 70 75
 Leu Ala Gly Ala Phe Ala Ser Phe Tyr Trp Ala Phe His Lys Pro
 80 85 90
 Gln Asp Ile Pro Thr Phe Pro Leu Ile Ser Ala Phe Ile Arg Thr
 95 100 105
 Leu Arg Tyr His Thr Gly Ser Leu Ala Phe Gly Ala Leu Ile Leu
 110 115 120
 Thr Leu Val Gln Ile Ala Arg Val Ile Leu Glu Tyr Ile Asp His
 125 130 135

Lys	Leu	Arg	Gly	Val	Gln	Asn	Pro	Val	Ala	Arg	Cys	Ile	Met	Cys	
				140					145					150	
Cys	Phe	Lys	Cys	Cys	Leu	Trp	Cys	Leu	Glu	Lys	Phe	Ile	Lys	Phe	
				155					160					165	
Leu	Asn	Arg	Asn	Ala	Tyr	Ile	Met	Ile	Ala	Ile	Tyr	Gly	Lys	Asn	
				170					175					180	
Phe	Cys	Val	Ser	Ala	Lys	Asn	Ala	Phe	Met	Leu	Leu	Met	Arg	Asn	
				185					190					195	
Ile	Val	Arg	Val	Val	Val	Leu	Asp	Lys	Val	Thr	Asp	Leu	Leu	Leu	
				200					205					210	
Phe	Phe	Gly	Lys	Leu	Leu	Val	Val	Gly	Gly	Val	Gly	Val	Leu	Ser	
				215					220					225	
Phe	Phe	Phe	Phe	Ser	Gly	Arg	Ile	Pro	Gly	Leu	Gly	Lys	Asp	Phe	
				230					235					240	
Lys	Ser	Pro	His	Leu	Asn	Tyr	Tyr	Trp	Leu	Pro	Ile	Met	Thr	Ser	
				245					250					255	
Ile	Leu	Gly	Ala	Tyr	Val	Ile	Ala	Ser	Gly	Phe	Phe	Ser	Val	Phe	
				260					265					270	
Gly	Met	Cys	Val	Asp	Thr	Leu	Phe	Leu	Cys	Phe	Leu	Glu	Asp	Leu	
				275					280					285	
Glu	Arg	Asn	Asn	Gly	Ser	Leu	Asp	Arg	Pro	Tyr	Tyr	Met	Ser	Lys	
				290					295					300	
Ser	Leu	Leu	Lys	Ile	Leu	Gly	Lys	Lys	Asn	Glu	Ala	Pro	Pro	Asp	
				305					310					315	
Asn	Lys	Lys	Arg	Lys	Lys										
				320											

<210> 37
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 37
 tcgtgcccag gggctgatgt gc 22

<210> 38
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 gtctttaccc agccccggga tgcg 24

<210> 39
 <211> 50

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 39
ggcctaattcc aacgtttctgt cttcaatctg caaatctatg gggtcctggg 50

<210> 40
<211> 1365
<212> DNA
<213> Homo sapiens

<400> 40
gagtcttgac cgccgcggg ctcttggtac ctcagcgca gcgccaggcg 50
tccggccgcc gtggctatgt tcgtgtccga tttccgcaa gagttctacg 100
agggtggtcca gagccagagg gtctttctct tcgtggcctc ggacgtggat 150
gctctgtgtg cgtgcaagat ccttcaggcc ttgttccagt gtgaccacgt 200
gcaatatacg ctggttccag tttctgggtg gcaagaactt gaaactgcat 250
ttcttgagca taaagaacag tttcattatt ttattctcat aaactgtgga 300
gctaattgtag acctattgga tattcttcaa cctgatgaag acactatatt 350
ctttgtgtgt gactcccata ggccagtcaa tgctgtcaat gtatacaacg 400
atacccagat caaattactc attaaacaag atgatgacct tgaagttccc 450
gcctatgaag acatcttcag ggatgaagag gaggatgaag agcattcagg 500
aaatgacagt gatgggtcag agccttctga gaagcgaca cggttagaag 550
aggagatagt ggagcaaacc atgcggagga ggcagcggcg agagtgggag 600
gcccgagaaa gagacatcct ctttgactac gagcagtatg aatatcatgg 650
gacatcgtca gccatggtga tgtttgagct ggcttgatg ctgtccaagg 700
acctgaatga catgctgtgg tgggccatcg ttggactaac agaccagtgg 750
gtgcaagaca agatcactca aatgaaatac gtgactgatg ttggtgtcct 800
gcagcgccac gtttcccgcc acaaccaccg gaacgaggat gaggagaaca 850
cactctcgtt ggactgcaca cggatctcct ttgagtatga cctccgcctg 900
gtgctctacc agcactggtc cctccatgac agcctgtgca acaccagcta 950
taocgcagcc aggttcaagc tgtggtctgt gcatggacag aagcggctcc 1000
aggagttoct tgcagacatg ggtcttcccc tgaagcaggt gaagcagaag 1050
ttccaggcca tggacatctc cttgaaggag aatttgcggg aaatgattga 1100
agagtctgca aataaatttg ggatgaagga catgcgcgtg cagaactttca 1150
gcattcattt tgggttcaag cacaagtttc tggccagcga cgtggtcttt 1200

gccaccatgt ctttgatgga gagccccgag aaggatggct cagggacaga 1250
 tcacttcac caggctctgg acagcctctc caggagtaac ctggacaagc 1300
 tgtaccatgg cctggaactc gccaagaagc agctgcgagc caccagcag 1350
 accattgccca gctgc 1365

<210> 41
 <211> 566
 <212> PRT
 <213> Homo sapiens

<400> 41
 Met Phe Val Ser Asp Phe Arg Lys Glu Phe Tyr Glu Val Val Gln
 1 5 10 15
 Ser Gln Arg Val Leu Leu Phe Val Ala Ser Asp Val Asp Ala Leu
 20 25 30
 Cys Ala Cys Lys Ile Leu Gln Ala Leu Phe Gln Cys Asp His Val
 35 40 45
 Gln Tyr Thr Leu Val Pro Val Ser Gly Trp Gln Glu Leu Glu Thr
 50 55 60
 Ala Phe Leu Glu His Lys Glu Gln Phe His Tyr Phe Ile Leu Ile
 65 70 75
 Asn Cys Gly Ala Asn Val Asp Leu Leu Asp Ile Leu Gln Pro Asp
 80 85 90
 Glu Asp Thr Ile Phe Phe Val Cys Asp Ser His Arg Pro Val Asn
 95 100 105
 Val Val Asn Val Tyr Asn Asp Thr Gln Ile Lys Leu Leu Ile Lys
 110 115 120
 Gln Asp Asp Asp Leu Glu Val Pro Ala Tyr Glu Asp Ile Phe Arg
 125 130 135
 Asp Glu Glu Glu Asp Glu Glu His Ser Gly Asn Asp Ser Asp Gly
 140 145 150
 Ser Glu Pro Ser Glu Lys Arg Thr Arg Leu Glu Glu Glu Ile Val
 155 160 165
 Glu Gln Thr Met Arg Arg Arg Gln Arg Arg Glu Trp Glu Ala Arg
 170 175 180
 Arg Arg Asp Ile Leu Phe Asp Tyr Glu Gln Tyr Glu Tyr His Gly
 185 190 195
 Thr Ser Ser Ala Met Val Met Phe Glu Leu Ala Trp Met Leu Ser
 200 205 210
 Lys Asp Leu Asn Asp Met Leu Trp Trp Ala Ile Val Gly Leu Thr
 215 220 225
 Asp Gln Trp Val Gln Asp Lys Ile Thr Gln Met Lys Tyr Val Thr
 230 235 240
 Asp Val Gly Val Leu Gln Arg His Val Ser Arg His Asn His Arg

<210> 42
 <211> 380
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 44, 118, 172, 183
 <223> unknown base

<400> 42
 gtacctcagc gcgagcgcca ggcgtccggc cgcggtggct atgntcgtgt 50
 ccgatttccg caaagagttc tacgaggtgg tccagagcca gagggtcctt 100
 ctcttcgtgg cctcggaagt ggatgctctg tgtgcgtgca agatccttca 150
 ggccttggtc cagtgtgacc angtgcaata tangctgggt ccagtttctg 200
 ggtggcaaga acttgaaaact gcatttcttg agcataaaga acagtttcat 250
 tattttattc tcataaactg tggagctaata gtagacctat tggatattct 300
 tcaacctgat gaagacaacta tattctttgt gtgtgacacc cataggccag 350
 tcaatgttgt caatgtatac aacgataccc 380

<210> 43
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 43
 ttccgcaaag agttctacga ggtgg 25

<210> 44
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 44
 attgacaaca ttgactggcc tatggg 26

<210> 45
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 45
 gtggatgctc tgtgtgcgtg caagatcctt caggccttgt tccagtgtga 50

<210> 46

<211> 3089

<212> DNA

<213> Homo sapiens

<400> 46

caggaaccct ctctttgggt ctggattggg acccctttcc agtaccattt 50
tttctagtga accacgaagg gacgatacca gaaaacaccc tcaaccctaaa 100
ggaaatagac tacagcccca attggctgac tttggctata gaaaaaagaa 150
aggaacgaaa agagacagtt ttttttggaa agctaagtct tccctttatc 200
gagtcaagaa accccccctt cttgagctat ttacagcttt taacaattga 250
gtaaagtacg ctccggtcac catggtgaca gccgccctgg gtcccgtctg 300
ggcagcgctc ctgctctttc tctgatgtg tgagatccgt atggtggagc 350
tcacctttga cagagctgtg gccagcggct gccaacggtg ctgtgactct 400
gaggaccccc tggatcctgc ccatgtatcc tcagcctctt cctccggccg 450
ccccacgcc ctgcctgaga tcagacccta cattaatatc accatcctga 500
agggtgacaa aggggaccca ggcccaatgg gcctgccagg gtacatgggc 550
agggagggtc cccaagggga gcctggccct cagggcagca agggtgacaa 600
gggggagatg ggcagccccg gcgccccgtg ccagaagcgc ttcttcgcct 650
tctcagtggg ccgcaagacg gcctgcaca gcggcgagga cttccagacg 700
ctgctcttcg aaagggctct tgtgaacctt gatgggtgct ttgacatggc 750
gaccggccag tttgctgctc ccctgcgtgg catctacttc ttcagcctca 800
atgtgcacag ctggaattac aaggagacgt acgtgcacat tatgcataac 850
cagaaagagg ctgtcatcct gtacgcgcag ccagcgcagc gcagcatcat 900
gcagagccag agtgtgatgc tggacctggc ctacggggac cgcgtctggg 950
tgcggtctct caagcgccag cgcgagaacg ccatctacag caacgacttc 1000
gacacctaca tcaccttcag cggccacctc atcaaggccg aggacgactg 1050
agggcctctg ggccaccctc ccggctggag agctcaggtg ctggtcccgt 1100
cccctgcagg gctcagtttg cactgctgtg aagcaggaag gccagggagg 1150
tccccgggga cctggcatto tggggagacc ctgcttctat cttggctgcc 1200
atcatccctc ccagcctatt tctgctcctc tcttctctct tggacctatt 1250
ttaagaagct tgctaacctc aatattctag aactttcca gcctcgtagc 1300
ccagcacttc tcaaacttgg aaatgcatgc gaatcacccg gggttcgtgt 1350
taaatgcaga ttctgactca gcaggtctga gtgggtccag gattctgtgt 1400
ttctcatatg ttcctgggtg atgctgatgg ggtcagtcta tgaaccacac 1450

tggagcaacc aggttctagg actttctcaa tattctagta ctttctgaac 1500
 attctggaat cctccccaca ttctagaatt ctccaacat ttttttttct 1550
 tgagacagag tcttgctctg ttgccaggc tagagtgcag tggtgcaatc 1600
 tcagttcact gcaacctctg cctcccggt tcaagcgatt cttctgcctc 1650
 agcctcccta gtggctggga ttacaggcgc ctgctaccat gcctggctaa 1700
 tttttgtatt tttagtagag atgggggttc accatattgg ccaggctggt 1750
 cttgaactcc tgacttcagg tgaccacccc gcctcggcct ctcaaatgc 1800
 tgggattaca ggtgtgagcc accgtgctg gccaatcca acattcttaa 1850
 attctctcat cctccaggg ctccccgtgc tatgttctct ttacccttc 1900
 cccctcttct cttgctcagg cctgcaccac tgcagccacc gttcatttat 1950
 tcattcatta aacctgagc actcactctg tgctgggtcc cgggaagggt 2000
 gaggggtca gacacaggc ctgcccctgc cctcagtgc tggccagtcc 2050
 agcccaggcg gggagagatg tgtacatagg ttttaaagca gaccagagc 2100
 tcatgggggc ctgtgttctg ggtgttcagg tgctgctggt cctccattac 2150
 ccactgctcc ccaaggctgg tgggacgggg tcccgggtggc aggggcaggt 2200
 atctccttcc cgttcctcat ccacctgccc agtgctcatc gttacagcaa 2250
 accccagggg gccttgcca ggtcaagggt tctgtgagga gaggaccag 2300
 gagtggtggg gcatttgggg ggtgaagtgg cccccgaaga atggaacca 2350
 caccatagc tctccccaca gctgatacgg catcctgcga gaagacctgc 2400
 cctcctcact gggatcccct tctgctctcc tcccagggt ctgccagggc 2450
 cttgctcagt cccttcacc aaagtcatct gaacttccgt tccccaggg 2500
 cctccagctg ccctcagaca ctgatgtctg tcccagggtg ctctctgccc 2550
 ctcatgcccc tctcaccggc ccagtgcccc gactctccag gctttatcaa 2600
 ggtgctaagg cccgggtggg cagctcctcg tctcagagcc ctctccggc 2650
 ctggtgctgc ctttacaac acctgcagga gaaggccac ggaagccca 2700
 ggcttttagag ccctcagcag gtctggggag ctagagcaaa ggaggacct 2750
 caggccttcc gtttcttctt ccagggtggg gtggcctggt gttcccctag 2800
 ccttccaaac ccagggtggc tgcccttctc cccagaggga ggcggcctcc 2850
 gccattggt gctcatgcag actctggggc tgagggtgcc cggggggtga 2900
 tctctggtgc tcacagccga gggagccgtg gctccatggc cagatgacgg 2950
 aaacagggtc tgaccaagtg ccaggaagac ctgtgctata aaccacctg 3000
 cctgatcctg cccctgctg accccgccac gccctgccgt ccagcatgat 3050

taaagaatgc tgtctcctct tggaaaaaaa aaaaaaaaa 3089

<210> 47

<211> 259

<212> PRT

<213> Homo sapiens

<220>

<221> Signal Peptide

<222> 1-20

<223> Signal Peptide

<220>

<221> N-glycosylation Site

<222> 72-75

<223> N-glycosylation Site

<220>

<221> Clq Domain Proteins

<222> 144-178, 78-111, 84-117

<223> Clq Domain Proteins

<400> 47

Met Val Thr Ala Ala Leu Gly Pro Val Trp Ala Ala Leu Leu Leu
1 5 10 15

Phe Leu Leu Met Cys Glu Ile Arg Met Val Glu Leu Thr Phe Asp
20 25 30

Arg Ala Val Ala Ser Gly Cys Gln Arg Cys Cys Asp Ser Glu Asp
35 40 45

Pro Leu Asp Pro Ala His Val Ser Ser Ala Ser Ser Ser Gly Arg
50 55 60

Pro His Ala Leu Pro Glu Ile Arg Pro Tyr Ile Asn Ile Thr Ile
65 70 75

Leu Lys Gly Asp Lys Gly Asp Pro Gly Pro Met Gly Leu Pro Gly
80 85 90

Tyr Met Gly Arg Glu Gly Pro Gln Gly Glu Pro Gly Pro Gln Gly
95 100 105

Ser Lys Gly Asp Lys Gly Glu Met Gly Ser Pro Gly Ala Pro Cys
110 115 120

Gln Lys Arg Phe Phe Ala Phe Ser Val Gly Arg Lys Thr Ala Leu
125 130 135

His Ser Gly Glu Asp Phe Gln Thr Leu Leu Phe Glu Arg Val Phe
140 145 150

Val Asn Leu Asp Gly Cys Phe Asp Met Ala Thr Gly Gln Phe Ala
155 160 165

Ala Pro Leu Arg Gly Ile Tyr Phe Phe Ser Leu Asn Val His Ser
170 175 180

Trp Asn Tyr Lys Glu Thr Tyr Val His Ile Met His Asn Gln Lys
185 190 195

Glu Ala Val Ile Leu Tyr Ala Gln Pro Ser Glu Arg Ser Ile Met

	200	205	210
Gln Ser Gln Ser	Val Met Leu Asp Leu	Ala Tyr Gly Asp Arg	Val
	215	220	225
Trp Val Arg Leu	Phe Lys Arg Gln Arg	Glu Asn Ala Ile Tyr	Ser
	230	235	240
Asn Asp Phe Asp	Thr Tyr Ile Thr Phe	Ser Gly His Leu Ile	Lys
	245	250	255
Ala Glu Asp Asp			

<210> 48
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 48
 ccagacgctg ctcttcgaaa gggtc 25

<210> 49
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 49
 ggtccccgta ggccagggtcc agc 23

<210> 50
 <211> 50
 <212> DNA
 <213> Artificial sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 50
 ctacttcttc agcctcaatg tgcacagctg gaattacaag gagacgtacg 50

<210> 51
 <211> 2768
 <212> DNA
 <213> Homo sapiens

<400> 51
 actcgaacgc agttgcttcg ggaoccagga cccctcggg cccgaccgc 50
 caggaaagac tgaggccgcg gcctgccccg cccggctccc tgcgcccgcg 100
 ccgctccccg ggacagaaga tgtgtccag ggtccctctg ctgtgccgc 150
 tgctcctgct actggccctg gggcctgggg tgcagggctg cccatccggc 200
 tgccagtgc ggcagccaca gacagtcttc tgactgccc gccaggggac 250

cacggtgccc cgagacgtgc caccogacac ggtggggctg tacgtctttg 300
agaacggcat caccatgtct gacgcaggca gctttgccgg cctgccgggc 350
ctgcagctcc tggacctgtc acagaaccag atcgccagcc tgcccagcgg 400
ggtcttccag ccactcgcca acctcagcaa cctggacctg acggccaaca 450
ggctgcatga aatcaccaat gagaccttcc gtggcctgcg gcgcctcgag 500
cgcctctacc tgggcaagaa ccgcattcgc cacatccagc ctggtgcctt 550
cgacacgtct gaccgcctcc tggagctcaa gctgcaggac aacgagctgc 600
gggcactgcc cccgctgcgc ctgccccgcc tgctgctgct ggacctcagc 650
cacaacagcc tcctggccct ggagcccgcc atcctggaca ctgccaacgt 700
ggaggcgtg cggttggtg gtctggggct gcagcagctg gacgaggggc 750
tcttcagccg cttgcgcaac ctccacgacc tggatgtgtc cgacaaccag 800
ctggagcgag tgccacctgt gatccgagggc ctccggggcc tgacgcgcct 850
gcggtggtgc ggcaacaccc gcattgccc a gctgcggccc gaggacctgg 900
ccggcctggc tgccctgcag gagctggatg tgagcaacct aagcctgcag 950
gccctgcctg gcgacctctc gggcctcttc ccccgctgc ggctgctggc 1000
agctgcccgc aaccccttca actgctgtg cccctgagc tggtttgcc 1050
cctgggtgcg cgagagccac gtcacactgg ccagccctga ggagacgcgc 1100
tgccacttcc cgcccaagaa cgctggccgg ctgctcctgg agcttgacta 1150
cgccgacttt ggctgcccag ccaccaccac cacagccaca gtgcccacca 1200
cgaggcccg ggtgcgggag cccacagcct tgtcttctag cttggctcct 1250
acctggctta gccccacagc gccggccact gaggcccca gcccgccctc 1300
cactgcccga ccgactgtag ggctgtccc ccagcccag gactgcccac 1350
cgtccacctg cctcaatggg ggcacatgcc acctggggac acggcaccac 1400
ctggcgtgct tgtgccccga aggtttcacg ggctgtact gtgagagcca 1450
gatggggcag gggacacggc ccagccctac accagtcacg ccgaggccac 1500
cacggtccct gacctgggc atcgagccgg tgagcccac ctccctgcgc 1550
gtggggctgc agcgtacct ccaggggagc tccgtgcagc tcaggagcct 1600
ccgtctcacc tatcgcaacc tatcgggccc tgataagcgg ctggtgacgc 1650
tgcgactgcc tgctcgctc gctgagtaca cggtcacca gctgcggccc 1700
aacgccactt actccgtctg tgtcatgctt ttggggcccg ggcggtgccc 1750
ggagggcgag gaggcctgcg gggaggccca tacaccccca gccgtccact 1800
ccaaccacgc ccagtcacc caggcccgcg agggcaacct gccgctctc 1850

attgcgcccc ccttgccgc ggtgtcctg gccgcgtgg ctgcggtggg 1900
 ggcagcctac tgtgtgcggc gggggcgggc catggcagca gcggctcagg 1950
 acaaagggca ggtggggcca ggggctgggc ccttgaact ggagggagtg 2000
 aaggtcccct tggagccagg cccgaaggca acagagggcg gtggagaggc 2050
 cctgcccagc gggctctgagt gtgaggtgcc actcatgggc ttcccagggc 2100
 ctggcctcca gtcacccctc cacgcaaagc cctacatcta agccagagag 2150
 agacagggca gctggggccg ggctctcagc cagtgagatg gccagcccc 2200
 tcctgtgtgc acaccacgta agttctcagt cccaacctcg gggatgtgtg 2250
 cagacagggc tgtgtgacca cagctggggc ctgttccctc tggacctcg 2300
 tctcctcatc tgtgagatgc tgtggcccag ctgacgagcc ctaacgtccc 2350
 cagaaccgag tgcctatgag gacagtgtcc gccctgccct ccgcaacgtg 2400
 cagtccctgg gcacggcggg cctgccatg tgctggtaac gcatgcctgg 2450
 gtctgtctgg gctctccac tccaggcggg cctggggggc cagtgaagga 2500
 agtcccgga aagagcagag ggagagcggg taggcggctg tgtgactcta 2550
 gtcttggccc caggaagcga aggaacaaaa gaaactggaa aggaagatgc 2600
 tttaggaaca tgttttgctt ttttaaaata tatatattta taagagatcc 2650
 tttccattt attctgggaa gatgtttttc aaactcagag acaaggactt 2700
 tggtttttgt aagacaaacg atgatatgaa ggccttttgt aagaaaaaat 2750
 aaaagatgaa gtgtgaaa 2768

<210> 52
 <211> 673
 <212> PRT
 <213> Homo sapiens

<400> 52
 Met Cys Ser Arg Val Pro Leu Leu Leu Pro Leu Leu Leu Leu Leu
 1 5 10 15
 Ala Leu Gly Pro Gly Val Gln Gly Cys Pro Ser Gly Cys Gln Cys
 20 25 30
 Ser Gln Pro Gln Thr Val Phe Cys Thr Ala Arg Gln Gly Thr Thr
 35 40 45
 Val Pro Arg Asp Val Pro Pro Asp Thr Val Gly Leu Tyr Val Phe
 50 55 60
 Glu Asn Gly Ile Thr Met Leu Asp Ala Gly Ser Phe Ala Gly Leu
 65 70 75
 Pro Gly Leu Gln Leu Leu Asp Leu Ser Gln Asn Gln Ile Ala Ser
 80 85 90
 Leu Pro Ser Gly Val Phe Gln Pro Leu Ala Asn Leu Ser Asn Leu

410					415					420				
His	Leu	Gly	Thr	Arg	His	His	Leu	Ala	Cys	Leu	Cys	Pro	Glu	Gly
				425					430					435
Phe	Thr	Gly	Leu	Tyr	Cys	Glu	Ser	Gln	Met	Gly	Gln	Gly	Thr	Arg
				440					445					450
Pro	Ser	Pro	Thr	Pro	Val	Thr	Pro	Arg	Pro	Pro	Arg	Ser	Leu	Thr
				455					460					465
Leu	Gly	Ile	Glu	Pro	Val	Ser	Pro	Thr	Ser	Leu	Arg	Val	Gly	Leu
				470					475					480
Gln	Arg	Tyr	Leu	Gln	Gly	Ser	Ser	Val	Gln	Leu	Arg	Ser	Leu	Arg
				485					490					495
Leu	Thr	Tyr	Arg	Asn	Leu	Ser	Gly	Pro	Asp	Lys	Arg	Leu	Val	Thr
				500					505					510
Leu	Arg	Leu	Pro	Ala	Ser	Leu	Ala	Glu	Tyr	Thr	Val	Thr	Gln	Leu
				515					520					525
Arg	Pro	Asn	Ala	Thr	Tyr	Ser	Val	Cys	Val	Met	Pro	Leu	Gly	Pro
				530					535					540
Gly	Arg	Val	Pro	Glu	Gly	Glu	Glu	Ala	Cys	Gly	Glu	Ala	His	Thr
				545					550					555
Pro	Pro	Ala	Val	His	Ser	Asn	His	Ala	Pro	Val	Thr	Gln	Ala	Arg
				560					565					570
Glu	Gly	Asn	Leu	Pro	Leu	Leu	Ile	Ala	Pro	Ala	Leu	Ala	Ala	Val
				575					580					585
Leu	Leu	Ala	Ala	Leu	Ala	Ala	Val	Gly	Ala	Ala	Tyr	Cys	Val	Arg
				590					595					600
Arg	Gly	Arg	Ala	Met	Ala	Ala	Ala	Ala	Gln	Asp	Lys	Gly	Gln	Val
				605					610					615
Gly	Pro	Gly	Ala	Gly	Pro	Leu	Glu	Leu	Glu	Gly	Val	Lys	Val	Pro
				620					625					630
Leu	Glu	Pro	Gly	Pro	Lys	Ala	Thr	Glu	Gly	Gly	Gly	Glu	Ala	Leu
				635					640					645
Pro	Ser	Gly	Ser	Glu	Cys	Glu	Val	Pro	Leu	Met	Gly	Phe	Pro	Gly
				650					655					660
Pro	Gly	Leu	Gln	Ser	Pro	Leu	His	Ala	Lys	Pro	Tyr	Ile		
				665					670					

<210> 53

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tcttcagccg cttgcgcaac ctc 23

<210> 54
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 54
ttgctcacat ccagctcctg cagg 24

<210> 55
<211> 41
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 55
tggatgttgt ccagacaacc agctggagct gtatccgagg c 41

<210> 56
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 56
gaatcatcca cgcacctgca gctctgctga gagagtgcaa gccgtggggg 50
ttttgagctc atcttcatca ttcataatgag gaaataagtg gtaaaatcct 100
tggaataaca atgagactca tcagaaacat ttacatattt tgtagtattg 150
ttatgacagc agaggggtgat gctccagagc tgccagaaga aagggaactg 200
atgaccaact gtcacaacat gtctctaaga aaggttcccg cagacttgac 250
cccagccaca acgacactgg atttatacta taacctcctt tttcaactcc 300
agagttcaga ttttcattct gtctccaaac tgagagtttt gattctatgc 350
cataacagaa ttcaacagct ggatctcaaa acctttgaat tcaacaagga 400
gttaagatat ttagatttgt ctaataacag actgaagagt gtaacttggg 450
atttactggc aggtctcagg tatttagatc tttcttttaa tgactttgac 500
accatgccta tctgtgagga agctggcaac atgtcacacc tggaaatcct 550
aggtttgagt ggggcaaaaa tacaaaaatc agatttccag aaaattgctc 600
atctgcatct aaatactgtc ttcttaggat tcagaactct tcctcattat 650
gaagaaggta gcctgcccat cttaaacaca acaaaactgc acattgtttt 700
accaatggac acaaatttct gggttctttt gcgtgatgga atcaagactt 750
caaaaatatt agaaatgaca aatatagatg gcaaaagcca atttgtaagt 800
tatgaaatgc aacgaaatct tagtttagaa aatgctaaga catcggttct 850
attgcttaat aaagttgatt tactctggga cgaccttttc cttatcttac 900

aatttgtttg gcatacatca gtggaacact ttcagatcog aaatgtgact 950
tttgggtgga aggettatat tgaccacaat tcatttgact actcaaatac 1000
tgtaatgaga actataaaaat tggagcatgt acatttcaga gtgttttaca 1050
ttcaacagga taaaatctat ttgcttttga ccaaaatgga catagaaaac 1100
ctgacaatat caaatgcaca aatgccacac atgcttttcc cgaattatcc 1150
tacgaaattc caatatTTaa attttgccaa taatatctta acagacgagt 1200
tgttttaaag aactatccaa ctgcctcact tgaaaactct ctttttgaat 1250
ggcaataaac tggagacact ttcttttagta agttgctttg ctaacaacac 1300
acccttggaa cacttggatc tgagtcaaaa totattacaa cataaaaatg 1350
atgaaaattg ctcatggcca gaaactgtgg tcaatatgaa tctgtcatac 1400
aataaattgt ctgattctgt cttcaggtgc ttgccccaaa gtattcaaatt 1450
acttgacctt aataataacc aaatccaaac tgtacctaaa gagactattc 1500
atctgatggc cttacgagaa ctaaattattg catttaattt tctaactgat 1550
ctccctggat gcagtcattt cagtagactt tcagttctga acattgaaat 1600
gaacttcatt ctcagcccat ctctggattt tgttcagagc tgccaggaag 1650
ttaaactct aaatgcggga agaaatocat tccggtgtac ctgtgaatta 1700
aaaaatttca ttcagcttga aacatattca gaggtcatga tggttggatg 1750
gtcagattca tacacctgtg aatacccttt aaacctaagg ggaactaggt 1800
taaaagacgt tcatctccac gaattatctt gcaacacagc tctgttgatt 1850
gtcaccattg tggttattat gctagttctg gggttggctg tggccttctg 1900
ctgtctccac tttgatctgc cctggtatct caggatgcta ggtcaatgca 1950
cacaaacatg gcacaggggtt aggaaaacaa cccaagaaca actcaagaga 2000
aatgtccgat tccacgcatt tatttcatac agtgaacatg attctctgtg 2050
ggtgaagaat gaattgatcc ccaatctaga gaaggaagat ggttctatct 2100
tgatttgcct ttatgaaagc taacttgacc ctggcaaaaag cattagttaa 2150
aatattgtaa gcttcattga gaaaagctat aagtccatct ttgttttgtc 2200
tcccaacttt gtccagaatg agtggtgcca ttatgaattc tactttgccc 2250
accacaatct ctcccatgaa aattctgac atataattct tatcttactg 2300
gaacccattc cattctattg cattcccacc aggtatcata aactgaaagc 2350
tctcctggaa aaaaagcat acttggaatg gcccaaggat aggcgtaaat 2400
gtgggctttt ctgggcaaac cttogagctg ctattaatgt taatgtatta 2450
gccaccagag aaatgtatga actgcagaca ttcacagagt taaatgaaga 2500

gtctcgaggt tctacaatct ctctgatgag aacagattgt ctataaaatc 2550
 ccacagtcct tgggaagttg gggaccacat acactgttgg gatgtacatt 2600
 gatacaacct ttatgatggc aatttgacaa tatttattaa aataaaaaat 2650
 ggttattccc ttcatatcag tttctagaag gatttctaag aatgtatcct 2700
 atagaaacac cttcacaagt ttataagggc ttatggaaaa aggtgttcat 2750
 cccaggattg tttataatca tgaaaaatgt ggccagggtgc agtgggtcac 2800
 tcttgtaatc ccagcaatc gggaggccaa ggtgggtgac ccacgaggtc 2850
 aagagatgga gaccatcctg gccaacatgg tgaaaccctg tctctactaa 2900
 aaatacaaaa attagctggg cgtgatgggtg cagcctgta gtcccagcta 2950
 cttgggaggc tgaggcagga gaatcgcttg aaccggggag gtggcagttg 3000
 cagtgaagctg agatcgagcc actgcactcc agcctgggtga cagagcgaga 3050
 ctccatctca aaaaaaagaa aaaaaaaaaa gaaaaaatg gaaaacatcc 3100
 tcatggccac aaaataaggt ctaattcaat aaattatagt acattaatgt 3150
 aatataatat tacatgccac taaaaagaat aaggtagctg tatatttcct 3200
 ggtatggaaa aaacatatta atatgttata aactattagg ttggtgcaaa 3250
 actaattgtg gtttttgcca ttgaaatggc attgaaataa aagtgtaaag 3300
 aaatctatac cagatgtagt aacagtgggtt tgggtctggg aggttggatt 3350
 acagggagca tttgatttct atgttggtgta tttctataat gtttgaattg 3400
 tttagaatga atctgtatct cttttataag tagaaaaaaa ataaagatag 3450
 tttttacagc ct 3462

<210> 57
 <211> 811
 <212> PRT
 <213> Homo sapiens

<400> 57
 Met Arg Leu Ile Arg Asn Ile Tyr Ile Phe Cys Ser Ile Val Met
 1 5 10 15
 Thr Ala Glu Gly Asp Ala Pro Glu Leu Pro Glu Glu Arg Glu Leu
 20 25 30
 Met Thr Asn Cys Ser Asn Met Ser Leu Arg Lys Val Pro Ala Asp
 35 40 45
 Leu Thr Pro Ala Thr Thr Thr Leu Asp Leu Ser Tyr Asn Leu Leu
 50 55 60
 Phe Gln Leu Gln Ser Ser Asp Phe His Ser Val Ser Lys Leu Arg
 65 70 75
 Val Leu Ile Leu Cys His Asn Arg Ile Gln Gln Leu Asp Leu Lys
 80 85 90

Thr	Phe	Glu	Phe	Asn	Lys	Glu	Leu	Arg	Tyr	Leu	Asp	Leu	Ser	Asn	
				95					100					105	
Asn	Arg	Leu	Lys	Ser	Val	Thr	Trp	Tyr	Leu	Leu	Ala	Gly	Leu	Arg	
				110					115					120	
Tyr	Leu	Asp	Leu	Ser	Phe	Asn	Asp	Phe	Asp	Thr	Met	Pro	Ile	Cys	
				125					130					135	
Glu	Glu	Ala	Gly	Asn	Met	Ser	His	Leu	Glu	Ile	Leu	Gly	Leu	Ser	
				140					145					150	
Gly	Ala	Lys	Ile	Gln	Lys	Ser	Asp	Phe	Gln	Lys	Ile	Ala	His	Leu	
				155					160					165	
His	Leu	Asn	Thr	Val	Phe	Leu	Gly	Phe	Arg	Thr	Leu	Pro	His	Tyr	
				170					175					180	
Glu	Glu	Gly	Ser	Leu	Pro	Ile	Leu	Asn	Thr	Thr	Lys	Leu	His	Ile	
				185					190					195	
Val	Leu	Pro	Met	Asp	Thr	Asn	Phe	Trp	Val	Leu	Leu	Arg	Asp	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Lys	Ile	Leu	Glu	Met	Thr	Asn	Ile	Asp	Gly	Lys	
				215					220					225	
Ser	Gln	Phe	Val	Ser	Tyr	Glu	Met	Gln	Arg	Asn	Leu	Ser	Leu	Glu	
				230					235					240	
Asn	Ala	Lys	Thr	Ser	Val	Leu	Leu	Leu	Asn	Lys	Val	Asp	Leu	Leu	
				245					250					255	
Trp	Asp	Asp	Leu	Phe	Leu	Ile	Leu	Gln	Phe	Val	Trp	His	Thr	Ser	
				260					265					270	
Val	Glu	His	Phe	Gln	Ile	Arg	Asn	Val	Thr	Phe	Gly	Gly	Lys	Ala	
				275					280					285	
Tyr	Leu	Asp	His	Asn	Ser	Phe	Asp	Tyr	Ser	Asn	Thr	Val	Met	Arg	
				290					295					300	
Thr	Ile	Lys	Leu	Glu	His	Val	His	Phe	Arg	Val	Phe	Tyr	Ile	Gln	
				305					310					315	
Gln	Asp	Lys	Ile	Tyr	Leu	Leu	Leu	Thr	Lys	Met	Asp	Ile	Glu	Asn	
				320					325					330	
Leu	Thr	Ile	Ser	Asn	Ala	Gln	Met	Pro	His	Met	Leu	Phe	Pro	Asn	
				335					340					345	
Tyr	Pro	Thr	Lys	Phe	Gln	Tyr	Leu	Asn	Phe	Ala	Asn	Asn	Ile	Leu	
				350					355					360	
Thr	Asp	Glu	Leu	Phe	Lys	Arg	Thr	Ile	Gln	Leu	Pro	His	Leu	Lys	
				365					370					375	
Thr	Leu	Ile	Leu	Asn	Gly	Asn	Lys	Leu	Glu	Thr	Leu	Ser	Leu	Val	
				380					385					390	
Ser	Cys	Phe	Ala	Asn	Asn	Thr	Pro	Leu	Glu	His	Leu	Asp	Leu	Ser	
				395					400					405	

Gln	Asn	Leu	Leu	Gln	His	Lys	Asn	Asp	Glu	Asn	Cys	Ser	Trp	Pro	410	415	420
Glu	Thr	Val	Val	Asn	Met	Asn	Leu	Ser	Tyr	Asn	Lys	Leu	Ser	Asp	425	430	435
Ser	Val	Phe	Arg	Cys	Leu	Pro	Lys	Ser	Ile	Gln	Ile	Leu	Asp	Leu	440	445	450
Asn	Asn	Asn	Gln	Ile	Gln	Thr	Val	Pro	Lys	Glu	Thr	Ile	His	Leu	455	460	465
Met	Ala	Leu	Arg	Glu	Leu	Asn	Ile	Ala	Phe	Asn	Phe	Leu	Thr	Asp	470	475	480
Leu	Pro	Gly	Cys	Ser	His	Phe	Ser	Arg	Leu	Ser	Val	Leu	Asn	Ile	485	490	495
Glu	Met	Asn	Phe	Ile	Leu	Ser	Pro	Ser	Leu	Asp	Phe	Val	Gln	Ser	500	505	510
Cys	Gln	Glu	Val	Lys	Thr	Leu	Asn	Ala	Gly	Arg	Asn	Pro	Phe	Arg	515	520	525
Cys	Thr	Cys	Glu	Leu	Lys	Asn	Phe	Ile	Gln	Leu	Glu	Thr	Tyr	Ser	530	535	540
Glu	Val	Met	Met	Val	Gly	Trp	Ser	Asp	Ser	Tyr	Thr	Cys	Glu	Tyr	545	550	555
Pro	Leu	Asn	Leu	Arg	Gly	Thr	Arg	Leu	Lys	Asp	Val	His	Leu	His	560	565	570
Glu	Leu	Ser	Cys	Asn	Thr	Ala	Leu	Leu	Ile	Val	Thr	Ile	Val	Val	575	580	585
Ile	Met	Leu	Val	Leu	Gly	Leu	Ala	Val	Ala	Phe	Cys	Cys	Leu	His	590	595	600
Phe	Asp	Leu	Pro	Trp	Tyr	Leu	Arg	Met	Leu	Gly	Gln	Cys	Thr	Gln	605	610	615
Thr	Trp	His	Arg	Val	Arg	Lys	Thr	Thr	Gln	Glu	Gln	Leu	Lys	Arg	620	625	630
Asn	Val	Arg	Phe	His	Ala	Phe	Ile	Ser	Tyr	Ser	Glu	His	Asp	Ser	635	640	645
Leu	Trp	Val	Lys	Asn	Glu	Leu	Ile	Pro	Asn	Leu	Glu	Lys	Glu	Asp	650	655	660
Gly	Ser	Ile	Leu	Ile	Cys	Leu	Tyr	Glu	Ser	Tyr	Phe	Asp	Pro	Gly	665	670	675
Lys	Ser	Ile	Ser	Glu	Asn	Ile	Val	Ser	Phe	Ile	Glu	Lys	Ser	Tyr	680	685	690
Lys	Ser	Ile	Phe	Val	Leu	Ser	Pro	Asn	Phe	Val	Gln	Asn	Glu	Trp	695	700	705
Cys	His	Tyr	Glu	Phe	Tyr	Phe	Ala	His	His	Asn	Leu	Phe	His	Glu	710	715	720

Asn	Ser	Asp	His	Ile	Ile	Leu	Ile	Leu	Leu	Glu	Pro	Ile	Pro	Phe
				725					730					735
Tyr	Cys	Ile	Pro	Thr	Arg	Tyr	His	Lys	Leu	Lys	Ala	Leu	Leu	Glu
				740					745					750
Lys	Lys	Ala	Tyr	Leu	Glu	Trp	Pro	Lys	Asp	Arg	Arg	Lys	Cys	Gly
				755					760					765
Leu	Phe	Trp	Ala	Asn	Leu	Arg	Ala	Ala	Ile	Asn	Val	Asn	Val	Leu
				770					775					780
Ala	Thr	Arg	Glu	Met	Tyr	Glu	Leu	Gln	Thr	Phe	Thr	Glu	Leu	Asn
				785					790					795
Glu	Glu	Ser	Arg	Gly	Ser	Thr	Ile	Ser	Leu	Met	Arg	Thr	Asp	Cys
				800					805					810

Leu

<210> 58
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 58
 tcccaccagg tatcataaac tgaa 24

<210> 59
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 59
 ttatagacaa tctgttctca tcagaga 27

<210> 60
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 60
 aaaaagcata cttggaatgg cccaaggata ggtgtaaag 40

<210> 61
 <211> 3772
 <212> DNA
 <213> Homo sapiens

<400> 61
 gggggctttc ttgggcttgg ctgcttgga cactgcctc caaggaccgg 50
 cctcggaggg gtcgccggga aaggaggga agaaggaagg gcggggccgg 100

ccccctgcg cccgccccgc gcctctgcgc gcccctgtcc gccccggccc 150
agcccagccc agccccgcgg gcgggtcaca cgcgagcca gccggccgcc 200
tcccgcgccc aagcgcgccg ctctgctgtg ccttgcgccc ttgccccgcg 250
ccagcttctg cgccccgagc ccgccccggc cccccggtga ccgtgaccct 300
gccctgggcg cggggcgagg caggcatgtc ccgccccggg accgctaccc 350
cagcgctggc cctggtgctc ctggcagtga ccttggccgg ggtcggagcc 400
cagggcgagc ccctcgagga ccctgattat tacgggcagg agatctggag 450
ccgggagccc tactacgcgc gcccgagacc cgagctcgag accttctctc 500
cgccgctgcc tgcggggccc ggggaggagt gggagcggcg cccgcaggag 550
cccaggccgc ccaagagggc caccaagccc aagaaagctc ccaagaggga 600
gaagtcggct ccggagccgc ctccaccagg taaacacagc acaaaaaag 650
ttatgagaac caagagctct gagaaggctg ccaacgatga tcacagtgtc 700
cgtgtggccc gtgaagatgt cagagagagt tgcccacctc ttggtctgga 750
aaccttaaaa atcacagact tccagctcca tgcctccacg gtgaagcgct 800
atggcctggg ggcacatcga gggagactca acatccaggc gggcattaat 850
gaaaatgatt tttatgacgg agcgtggtgc gcgggaagaa atgacctcca 900
gcagtggatt gaagtggatg ctcggcgcct gaccagattc actggtgtca 950
tcaactaagg gaggaactcc ctctggctga gtgactgggt gacatcctat 1000
aaggatcatg tgagcaatga cagccacacg tgggtcactg ttaagaatgg 1050
atctggagac atgatatttg agggaaacag tgagaaggag atccctgttc 1100
tcaatgagct acccgctccc atggtggccc gctacatccg cataaaccct 1150
cagtccctgt ttgataatgg gagcatctgc atgagaatgg agatccctggg 1200
ctgcccactg ccagatccta ataattatta tcaccgccgg aacgagatga 1250
ccaccactga tgacctgat tttaagcacc acaattataa ggaaatgcgc 1300
cagttgatga aagttgtgaa tgaaatgtgt cccaatatca ccagaattta 1350
caacattgga aaaagccacc agggcctgaa gctgtatgct gtggagatct 1400
cagatcacc cggggagcat gaagtcgggt agcccgagtt ccactacatc 1450
gcgggggccc acggcaatga ggtgctgggc cgggagctgc tgctgctgct 1500
ggtgcagttc gtgtgtcagg agtacttggc ccggaatgcg cgcacgtcc 1550
acctggtgga ggagacgcgg attcacgtcc tcccctccct caaccccgat 1600
ggctacgaga aggcctacga agggggctcg gagctgggag gctggtccct 1650
gggacgctgg acccacgatg gaattgacat caacaacaac tttcctgatt 1700

taaacacgct gctctgggag gcagaggatc gacagaatgt ccccaggaaa 1750
 gttcccaatc actatatcgc aatccctgag tggtttctgt cggaatatgc 1800
 cacggtggct gccgagacca gagcagtcac agcctggatg gaaaaaatcc 1850
 cttttgtgct gggcggcaac ctgcagggcg gcgagctggt ggtggcgtat 1900
 ccctacgacc tggcgcggc cccctggaag acgcaggaac acacccccac 1950
 ccccgatgac cacgtgttcc gctggctggc ctactoctat gcctccacac 2000
 accgcctcat gacagacgcc cggaggaggg tgtgccacac ggaggacttc 2050
 cagaaggagg agggcactgt caatggggcc tcctggcaca ccgtcgctgg 2100
 aagtctgaac gatttcagct accttcatac aaactgcttc gaactgtcca 2150
 tctacgtggg ctgtgataaa taccacatg agagccagct gcccgaggag 2200
 tgggagaata accgggaatc tctgatcgtg ttcattggagc aggttcacgc 2250
 tggcattaaa ggcttgggta gagattcaca tggaaaagga atcccaaacg 2300
 ccattatctc cgtagaaggc attaacatg acatccgaac agccaacgat 2350
 ggggattact ggcgcctcct gaaccctgga gagtatgtgg tcacagcaaa 2400
 ggccgaaggt ttcactgcat ccaccaagaa ctgtatgggt ggctatgaca 2450
 tggggggccac aaggtgtgac ttcacactta gcaaaaccaa catggccagg 2500
 atccgagaga tcatggagaa gtttgggaag cagcccgta gcctgccagc 2550
 caggcggtg aagctgcggg ggcggaagag acgacagcgt gggtgaccct 2600
 cctgggccct tgagactcgt ctgggaccca tgcaaattaa accaacctgg 2650
 tagtagctcc atagtggact cactcactgt tgtttcctct gtaattcaag 2700
 aagtgcctgg aagagagggg gcattgtgag gcagggtcca aaagggaagg 2750
 ctggaggctg aggtgtttt cttttctttg ttcccattta tccaaataac 2800
 ttggacagag cagcagagaa aagctgatgg gagtgagaga actcagcaag 2850
 ccaacctggg aatcagagag agaaggagaa ggaggggagc ctgtccgttc 2900
 agagcctctg gctgcataga aaaggattct ggtgcttccc ctgtttgcgt 2950
 ggcagcaagg gttccacgtg catttgcaat ttgcacagct aaaattgcag 3000
 catttcccca gctgggctgt cccaaatgtt accatttgag atgctcccag 3050
 gcgtcctaag agaatccacc ctctctggcc ctgggacatt gcaagctgct 3100
 acaaataaat tctgtgttct ttgacaata gcgtcattgc caagtgcaca 3150
 tcagtgaacc tcttgaatct gtttagtctc ctttttcaac aaaggagtgt 3200
 gttcagaaaa ggagagagag gctgagatca ttcaggagt tgttgggcag 3250
 caagcatgga gcttcttgca caaattctgg gtccataaac aacccccaaa 3300

gtccctgctg atccagtagc cctggagggtt ccccaggtag ggagagccag 3350
 aggtgccagc cttcctgaag ggccagaaaa tttagcctgg atctcctctt 3400
 ttacctgcta ggactggaaa gagccagaag tgggggtggc tgaagccctc 3450
 tctctgcttg aggtattgcc cctgtgtgga attgagtgt catgggttg 3500
 cctcatatca gcctgggagt tatttttgat atgtagaatg ccagatcttc 3550
 cagattaggc taaatgtaat gaaaacctct taggattatc tgtggagcat 3600
 cagtttggga agaattattg aattatcttg caagaaaaaa gtatgtctca 3650
 ctttttgta atgttgctgc ctcatcgacc tgggaaaaat gaaaaaaaaa 3700
 aataaagcaa atggtgaagac ccttaaaaaa aaaaaaaaaa aaaaaaaaaa 3750
 aaaaaaaaaa aaaaaaaaaa aa 3772

<210> 62

<211> 756

<212> PRT

<213> Homo sapiens

<400> 62

Met	Ser	Arg	Pro	Gly	Thr	Ala	Thr	Pro	Ala	Leu	Ala	Leu	Val	Leu
1				5					10					15
Leu	Ala	Val	Thr	Leu	Ala	Gly	Val	Gly	Ala	Gln	Gly	Ala	Ala	Leu
				20					25					30
Glu	Asp	Pro	Asp	Tyr	Tyr	Gly	Gln	Glu	Ile	Trp	Ser	Arg	Glu	Pro
				35					40					45
Tyr	Tyr	Ala	Arg	Pro	Glu	Pro	Glu	Leu	Glu	Thr	Phe	Ser	Pro	Pro
				50					55					60
Leu	Pro	Ala	Gly	Pro	Gly	Glu	Glu	Trp	Glu	Arg	Arg	Pro	Gln	Glu
				65					70					75
Pro	Arg	Pro	Pro	Lys	Arg	Ala	Thr	Lys	Pro	Lys	Lys	Ala	Pro	Lys
				80					85					90
Arg	Glu	Lys	Ser	Ala	Pro	Glu	Pro	Pro	Pro	Pro	Gly	Lys	His	Ser
				95					100					105
Asn	Lys	Lys	Val	Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn
				110					115					120
Asp	Asp	His	Ser	Val	Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser
				125					130					135
Cys	Pro	Pro	Leu	Gly	Leu	Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln
				140					145					150
Leu	His	Ala	Ser	Thr	Val	Lys	Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg
				155					160					165
Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly	Ile	Asn	Glu	Asn	Asp	Phe	Tyr
				170					175					180
Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile

500										505					510				
Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr					
				515					520					525					
Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr					
				530					535					540					
Pro	Thr	Pro	Asp	Asp	His	Val	Phe	Arg	Trp	Leu	Ala	Tyr	Ser	Tyr					
				545					550					555					
Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys					
				560					565					570					
His	Thr	Glu	Asp	Phe	Gln	Lys	Glu	Glu	Gly	Thr	Val	Asn	Gly	Ala					
				575					580					585					
Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu					
				590					595					600					
His	Thr	Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys					
				605					610					615					
Tyr	Pro	His	Glu	Ser	Gln	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg					
				620					625					630					
Glu	Ser	Leu	Ile	Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys					
				635					640					645					
Gly	Leu	Val	Arg	Asp	Ser	His	Gly	Lys	Gly	Ile	Pro	Asn	Ala	Ile					
				650					655					660					
Ile	Ser	Val	Glu	Gly	Ile	Asn	His	Asp	Ile	Arg	Thr	Ala	Asn	Asp					
				665					670					675					
Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr					
				680					685					690					
Ala	Lys	Ala	Glu	Gly	Phe	Thr	Ala	Ser	Thr	Lys	Asn	Cys	Met	Val					
				695					700					705					
Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	Asp	Phe	Thr	Leu	Ser	Lys					
				710					715					720					
Thr	Asn	Met	Ala	Arg	Ile	Arg	Glu	Ile	Met	Glu	Lys	Phe	Gly	Lys					
				725					730					735					
Gln	Pro	Val	Ser	Leu	Pro	Ala	Arg	Arg	Leu	Lys	Leu	Arg	Gly	Arg					
				740					745					750					
Lys	Arg	Arg	Gln	Arg	Gly														
				755															

<210> 63

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 63

gttctcaatg agctacccgt cccc 24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 64
cgcgatgtag tggaactcgg gctc 24

<210> 65
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 65
atccgcataa accctcagtc ctggtttgat aatgggagca tctgcatgag 50

<210> 66
<211> 2854
<212> DNA
<213> Homo sapiens

<400> 66
ctaagaggac aagatgaggg ccggcctctc atttctccta gcccttctgt 50
tcttccttgg ccaagctgca ggggatttgg gggatgtggg acctccaatt 100
cccagccccg gcttcagctc tttcccaggt gttgactcca gctccagctt 150
cagctccagc tccaggctgg gctccagctc cagccgcagc ttaggcagcg 200
gaggttctgt gtcccagttg ttttccaatt tcaccggctc cgtggatgac 250
cgtgggacct gccagtgtc tgtttccctg ccagacacca cctttcccg 300
ggacagagtg gaacgcttgg aattcacagc tcatgttctt tctcagaagt 350
ttgagaaaga actttctaaa gtgagggaa atgtccaatt aattagtgtg 400
tatgaaaaga aactgttaaa cctaactgtc cgaattgaca tcatggagaa 450
ggataccatt tcttacctg aactggactt cgagctgac aaggtagaag 500
tgaaggagat ggaaaaactg gtcatacagc tgaaggagag ttttggtgga 550
agctcagaaa ttgttgacca gctggagggtg gagataagaa atatgactct 600
cttggtagag aagcttgaga cactagacaa aaacaatgtc cttgccattc 650
gccgagaaat cgtggctctg aagaccaagc tgaaagagtg tgaggcctct 700
aaagatcaaa acaccctgt cgtccacct cctccactc caggagctg 750
tggtcatggt ggtgtggtga acatcagcaa accgtctgtg gttcagctca 800
actggagagg gttttcttat ctatatggtg cttggggtag ggattactct 850
ccccagcatc caaacaagg actgtattgg gtggcgccat tgaatacaga 900

tgggagactg ttggagtatt atagactgta caacacactg gatgatttgc 950
 tattgtatat aaatgctcga gagttgogga tcacctatgg ccaaggtagt 1000
 ggtacagcag tttacaacaa caacatgtac gtcaacatgt acaacaccgg 1050
 gaatattgcc agagttaacc tgaccaccaa cacgattgct gtgactcaaa 1100
 ctctccctaa tgctgcctat aataaccgct tttcatatgc taatgttgct 1150
 tggcaagata ttgactttgc tgtggatgag aatggattgt gggttattta 1200
 ttcaactgaa gccagcactg gtaacatggg gattagtaaa ctcaatgaca 1250
 ccacacttca ggtgctaaac acttggtata ccaagcagta taaaccatct 1300
 gcttctaacg ccttcatggg atgtgggggt ctgtatgcca cccgtactat 1350
 gaacaccaga acagaagaga ttttttacta ttatgacaca aacacaggga 1400
 aagagggcaa actagacatt gtaatgcata agatgcagga aaaagtgcag 1450
 agcattaact ataacccttt tgaccagaaa ctttatgtct ataacgatgg 1500
 ttaccttctg aattatgatc tttctgtctt gcagaagccc cagtaagctg 1550
 tttaggagt agggtgaaag agaaaatgtt tgttgaaaaa atagtcttct 1600
 ccacttactt agatatctgc aggggtgtct aaaagtgtgt tcattttgca 1650
 gcaatgttta ggtgcatagt tctaccacac tagagatcta ggacatttgt 1700
 cttgatttgg tgagttctct tgggaatcat ctgcctcttc aggcgcattt 1750
 tgcaataaag tctgtctagg gtgggattgt cagaggtcta ggggcactgt 1800
 gggcctagt aagcctactg tgaggagggt tcaactagaag ccttaaatta 1850
 ggaattaagg aacttaaaac tcagtatggc gtctagggat tctttgtaca 1900
 ggaaatattg cccaatgact agtcctcatc catgtagcac cactaattct 1950
 tccatgcctg gaagaaacct ggggacttag ttaggtagat taatatctgg 2000
 agtcctcga gggaccaaact ctccaacttt tttttcccct cactagcacc 2050
 tggaatgatg ctttgtatgt ggcagataag taaatttggc atgcttatat 2100
 attctacatc tgtaaagtgc tgagttttat ggagagagggc ctttttatgc 2150
 attaaattgt acatggcaaa taaatcccag aaggatctgt agatgaggca 2200
 cctgcttttt cttttctctc attgtccacc ttactaaaag tcagtagaat 2250
 cttctacctc ataacttcct tccaaaggca gctcagaaga ttagaaccag 2300
 acttactaac caattccacc ccccaccaac ccccttctac tgctacttt 2350
 aaaaaaatta atagttttct atgggaactga totaagatta gaaaaattaa 2400
 ttttcttta tttcattatg gacttttatt tacatgactc taagactata 2450
 agaaaatctg atggcagtga caaagtgcta gcatttattg ttatctaata 2500

aagaccttgg agcatatgtg caacttatga gtgtatcagt tgttgcattgt 2550
aatttttggc tttgtttaag cctggaactt gtaagaaaat gaaaatttaa 2600
tttttttttc taggacgagc tatagaaaag ctattgagag tatctagtta 2650
atcagtgcag tagttggaaa ccttgctggt gtatgtgatg tgcttctgtg 2700
cttttgaatg actttatcat ctagtctttg tctatttttc ctttgatgtt 2750
caagtcctag tctataggat tggcagttta aatgcctttac tccccctttt 2800
aaaataaatg attaaaatgt gctttgaaaa aaaaaaaaaa aaaaaaaaaa 2850
aaaa 2854

<210> 67

<211> 510

<212> PRT

<213> Homo sapiens

<400> 67

Met	Arg	Pro	Gly	Leu	Ser	Phe	Leu	Leu	Ala	Leu	Leu	Phe	Phe	Leu	1	5	10	15
Gly	Gln	Ala	Ala	Gly	Asp	Leu	Gly	Asp	Val	Gly	Pro	Pro	Ile	Pro	20	25	30	
Ser	Pro	Gly	Phe	Ser	Ser	Phe	Pro	Gly	Val	Asp	Ser	Ser	Ser	Ser	35	40	45	
Phe	Ser	Ser	Ser	Ser	Arg	Ser	Gly	Ser	Ser	Ser	Ser	Arg	Ser	Leu	50	55	60	
Gly	Ser	Gly	Gly	Ser	Val	Ser	Gln	Leu	Phe	Ser	Asn	Phe	Thr	Gly	65	70	75	
Ser	Val	Asp	Asp	Arg	Gly	Thr	Cys	Gln	Cys	Ser	Val	Ser	Leu	Pro	80	85	90	
Asp	Thr	Thr	Phe	Pro	Val	Asp	Arg	Val	Glu	Arg	Leu	Glu	Phe	Thr	95	100	105	
Ala	His	Val	Leu	Ser	Gln	Lys	Phe	Glu	Lys	Glu	Leu	Ser	Lys	Val	110	115	120	
Arg	Glu	Tyr	Val	Gln	Leu	Ile	Ser	Val	Tyr	Glu	Lys	Lys	Leu	Leu	125	130	135	
Asn	Leu	Thr	Val	Arg	Ile	Asp	Ile	Met	Glu	Lys	Asp	Thr	Ile	Ser	140	145	150	
Tyr	Thr	Glu	Leu	Asp	Phe	Glu	Leu	Ile	Lys	Val	Glu	Val	Lys	Glu	155	160	165	
Met	Glu	Lys	Leu	Val	Ile	Gln	Leu	Lys	Glu	Ser	Phe	Gly	Gly	Ser	170	175	180	
Ser	Glu	Ile	Val	Asp	Gln	Leu	Glu	Val	Glu	Ile	Arg	Asn	Met	Thr	185	190	195	
Leu	Leu	Val	Glu	Lys	Leu	Glu	Thr	Leu	Asp	Lys	Asn	Asn	Val	Leu	200	205	210	

Ala	Ile	Arg	Arg	Glu	Ile	Val	Ala	Leu	Lys	Thr	Lys	Leu	Lys	Glu	215	220	225
Cys	Glu	Ala	Ser	Lys	Asp	Gln	Asn	Thr	Pro	Val	Val	His	Pro	Pro	230	235	240
Pro	Thr	Pro	Gly	Ser	Cys	Gly	His	Gly	Gly	Val	Val	Asn	Ile	Ser	245	250	255
Lys	Pro	Ser	Val	Val	Gln	Leu	Asn	Trp	Arg	Gly	Phe	Ser	Tyr	Leu	260	265	270
Tyr	Gly	Ala	Trp	Gly	Arg	Asp	Tyr	Ser	Pro	Gln	His	Pro	Asn	Lys	275	280	285
Gly	Leu	Tyr	Trp	Val	Ala	Pro	Leu	Asn	Thr	Asp	Gly	Arg	Leu	Leu	290	295	300
Glu	Tyr	Tyr	Arg	Leu	Tyr	Asn	Thr	Leu	Asp	Asp	Leu	Leu	Leu	Tyr	305	310	315
Ile	Asn	Ala	Arg	Glu	Leu	Arg	Ile	Thr	Tyr	Gly	Gln	Gly	Ser	Gly	320	325	330
Thr	Ala	Val	Tyr	Asn	Asn	Asn	Met	Tyr	Val	Asn	Met	Tyr	Asn	Thr	335	340	345
Gly	Asn	Ile	Ala	Arg	Val	Asn	Leu	Thr	Thr	Asn	Thr	Ile	Ala	Val	350	355	360
Thr	Gln	Thr	Leu	Pro	Asn	Ala	Ala	Tyr	Asn	Asn	Arg	Phe	Ser	Tyr	365	370	375
Ala	Asn	Val	Ala	Trp	Gln	Asp	Ile	Asp	Phe	Ala	Val	Asp	Glu	Asn	380	385	390
Gly	Leu	Trp	Val	Ile	Tyr	Ser	Thr	Glu	Ala	Ser	Thr	Gly	Asn	Met	395	400	405
Val	Ile	Ser	Lys	Leu	Asn	Asp	Thr	Thr	Leu	Gln	Val	Leu	Asn	Thr	410	415	420
Trp	Tyr	Thr	Lys	Gln	Tyr	Lys	Pro	Ser	Ala	Ser	Asn	Ala	Phe	Met	425	430	435
Val	Cys	Gly	Val	Leu	Tyr	Ala	Thr	Arg	Thr	Met	Asn	Thr	Arg	Thr	440	445	450
Glu	Glu	Ile	Phe	Tyr	Tyr	Tyr	Asp	Thr	Asn	Thr	Gly	Lys	Glu	Gly	455	460	465
Lys	Leu	Asp	Ile	Val	Met	His	Lys	Met	Gln	Glu	Lys	Val	Gln	Ser	470	475	480
Ile	Asn	Tyr	Asn	Pro	Phe	Asp	Gln	Lys	Leu	Tyr	Val	Tyr	Asn	Asp	485	490	495
Gly	Tyr	Leu	Leu	Asn	Tyr	Asp	Leu	Ser	Val	Leu	Gln	Lys	Pro	Gln	500	505	510

<210> 68
 <211> 410
 <212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 206, 217, 387

<223> unknown base

<400> 68

gctctgaaga ccaagctgaa agagtgtgag gcctctaaag atcaaacacc 50
cctgtcgtcc accctcctcc cactccaggg agctgtggtc atgggtggtgt 100
ggtgaacatc agcaaaccgt ctgtggttca gctcaactgg agaggggtttt 150
cttatctata tgggtgcttg ggtagggatt actctcccca gcatccaaac 200
aaaggnatgt attggngggc gccattgaat acagatggga gactgttgga 250
gtattataga ctgtacaacc cactggatga tttgctattg tatataaatg 300
ctcgagagtt gcggatcacc tatggccaag gtagtggtac agcagtttac 350
aacaacaaca tgtacgtcaa catgtacaac accgggnata ttgccagagt 400
taacctgacc 410

<210> 69

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 69

agctgtggtc atgggtggtgt ggtg 24

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ctaccttggc cataggtgat ccgc 24

<210> 71

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

catcagcaaa ccgtctgtgg ttcagctcaa ctggagaggg tt 42

<210> 72

<211> 3127

<212> DNA

<213> Homo sapiens

<400> 72

tctcgcagat agtaaataat ctcggaagagg cgagaaagaa gctgtctcca 50
tcttgtctgt atccgctgct cttgtgacgt tgtggagatg gggagcgtcc 100
tggggctgtg ctccatggcg agctggatac catgtttgtg tggaagtgcc 150
ccgtgtttgc tatgccgatg ctgtcctagt ggaaacaact ccactgtaac 200
tagattgac tatgcacttt tcttgcttgt tggagtatgt gtagcttgtg 250
taatgttgat accaggaatg gaagaacaac tgaataagat tcctggattt 300
tgtgagaatg agaaagggtg tgtcccttgt aacattttgg ttggctataa 350
agctgtatat cgtttgtgct ttggtttggc tatgttctat cttcttctct 400
ctttactaat gatcaaagtg aagagtagca gtgacctag agctgcagtg 450
cacaatggat tttggttctt taaatttgc gcagcaattg caattattat 500
tggggcattc ttcattccag aagggaacttt tacaactgtg tggttttatg 550
taggcattggc aggtgccttt tgtttcatcc tcatacaact agtcttactt 600
attgattttg cacattcatg gaatgaatcg tgggttgaaa aaatggaaga 650
agggaactcg agatgttggg atgcagcctt gttatcagct acagctctga 700
attatctgct gtcttttagt gctatogtcc tgttctttgt ctactacact 750
catccagcca gttgttcaga aaacaaggcg ttcatcagtg tcaacatgct 800
cctctgcgtt ggtgcttctg taatgtctat actgccaaaa atccaagaat 850
cacaaccaag atctggtttg ttacagtctt cagtaattac agtctacaca 900
atgtatttga catggtcagc tatgaccaat gaaccagaaa caaattgcaa 950
cccaagtcta ctaagcataa ttggctacaa tacaacaagc actgtcccaa 1000
aggaagggca gtcagtccag tgggtggcatg ctcaaggaat tataggacta 1050
attctctttt tgttgtgtgt attttattcc agcatccgta cttcaaacia 1100
tagtcagggt aataaaactga ctctaacaag tgatgaatct acattaatag 1150
aagatggtgg agctagaagt gatggatcac tggaggatgg ggacgatgtt 1200
caccgagctg tagataatga aagggatggg gtcacttaca gttattcctt 1250
ctttcacttc atgtttttcc tggcttcaact ttatatcatg atgaccctta 1300
ccaactggtc cagggtatgaa ccctctcgtg agatgaaaag tcagtggaca 1350
gctgtctggg tgaaaatctc ttccagttgg attggcatcg tgctgtatgt 1400
ttggacactc gtggcaccac ttgttcttac aaatcgtgat tttgactgag 1450
tgagacttct agcatgaaag toccactttg attattgctt atttgaaaac 1500
agtattccca acttttgtaa agttgtgtat gtttttgctt cccatgtaac 1550

<210> 73
 <211> 453
 <212> PRT
 <213> Homo sapiens

<400> 73

Met	Gly	Ser	Val	Leu	Gly	Leu	Cys	Ser	Met	Ala	Ser	Trp	Ile	Pro
1				5					10					15
Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Leu	Leu	Cys	Arg	Cys	Cys	Pro
				20					25					30
Ser	Gly	Asn	Asn	Ser	Thr	Val	Thr	Arg	Leu	Ile	Tyr	Ala	Leu	Phe
				35					40					45
Leu	Leu	Val	Gly	Val	Cys	Val	Ala	Cys	Val	Met	Leu	Ile	Pro	Gly
				50					55					60
Met	Glu	Glu	Gln	Leu	Asn	Lys	Ile	Pro	Gly	Phe	Cys	Glu	Asn	Glu
				65					70					75
Lys	Gly	Val	Val	Pro	Cys	Asn	Ile	Leu	Val	Gly	Tyr	Lys	Ala	Val
				80					85					90
Tyr	Arg	Leu	Cys	Phe	Gly	Leu	Ala	Met	Phe	Tyr	Leu	Leu	Leu	Ser
				95					100					105
Leu	Leu	Met	Ile	Lys	Val	Lys	Ser	Ser	Ser	Asp	Pro	Arg	Ala	Ala
				110					115					120
Val	His	Asn	Gly	Phe	Trp	Phe	Phe	Lys	Phe	Ala	Ala	Ala	Ile	Ala
				125					130					135
Ile	Ile	Ile	Gly	Ala	Phe	Phe	Ile	Pro	Glu	Gly	Thr	Phe	Thr	Thr
				140					145					150
Val	Trp	Phe	Tyr	Val	Gly	Met	Ala	Gly	Ala	Phe	Cys	Phe	Ile	Leu
				155					160					165
Ile	Gln	Leu	Val	Leu	Leu	Ile	Asp	Phe	Ala	His	Ser	Trp	Asn	Glu
				170					175					180
Ser	Trp	Val	Glu	Lys	Met	Glu	Glu	Gly	Asn	Ser	Arg	Cys	Trp	Tyr
				185					190					195
Ala	Ala	Leu	Leu	Ser	Ala	Thr	Ala	Leu	Asn	Tyr	Leu	Leu	Ser	Leu
				200					205					210
Val	Ala	Ile	Val	Leu	Phe	Phe	Val	Tyr	Tyr	Thr	His	Pro	Ala	Ser
				215					220					225
Cys	Ser	Glu	Asn	Lys	Ala	Phe	Ile	Ser	Val	Asn	Met	Leu	Leu	Cys
				230					235					240
Val	Gly	Ala	Ser	Val	Met	Ser	Ile	Leu	Pro	Lys	Ile	Gln	Glu	Ser
				245					250					255
Gln	Pro	Arg	Ser	Gly	Leu	Leu	Gln	Ser	Ser	Val	Ile	Thr	Val	Tyr
				260					265					270
Thr	Met	Tyr	Leu	Thr	Trp	Ser	Ala	Met	Thr	Asn	Glu	Pro	Glu	Thr
				275					280					285

Asn	Cys	Asn	Pro	Ser	Leu	Leu	Ser	Ile	Ile	Gly	Tyr	Asn	Thr	Thr	
				290					295					300	
Ser	Thr	Val	Pro	Lys	Glu	Gly	Gln	Ser	Val	Gln	Trp	Trp	His	Ala	
				305					310					315	
Gln	Gly	Ile	Ile	Gly	Leu	Ile	Leu	Phe	Leu	Leu	Cys	Val	Phe	Tyr	
				320					325					330	
Ser	Ser	Ile	Arg	Thr	Ser	Asn	Asn	Ser	Gln	Val	Asn	Lys	Leu	Thr	
				335					340					345	
Leu	Thr	Ser	Asp	Glu	Ser	Thr	Leu	Ile	Glu	Asp	Gly	Gly	Ala	Arg	
				350					355					360	
Ser	Asp	Gly	Ser	Leu	Glu	Asp	Gly	Asp	Asp	Val	His	Arg	Ala	Val	
				365					370					375	
Asp	Asn	Glu	Arg	Asp	Gly	Val	Thr	Tyr	Ser	Tyr	Ser	Phe	Phe	His	
				380					385					390	
Phe	Met	Leu	Phe	Leu	Ala	Ser	Leu	Tyr	Ile	Met	Met	Thr	Leu	Thr	
				395					400					405	
Asn	Trp	Ser	Arg	Tyr	Glu	Pro	Ser	Arg	Glu	Met	Lys	Ser	Gln	Trp	
				410					415					420	
Thr	Ala	Val	Trp	Val	Lys	Ile	Ser	Ser	Ser	Trp	Ile	Gly	Ile	Val	
				425					430					435	
Leu	Tyr	Val	Trp	Thr	Leu	Val	Ala	Pro	Leu	Val	Leu	Thr	Asn	Arg	
				440					445					450	

Asp Phe Asp

<210> 74
 <211> 480
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 48, 163
 <223> unknown base

<400> 74
 gcgagaaaga agctgtctcc atcttgtctg tatcccgctg cttcttgnga 50
 cgttgtggag atggggagcg tccctggggc tgtgtccat ggcgagctgg 100
 ataccatgtt tgtgtggaag tgccccgtgt ttgctatgcc gatgctgtcc 150
 tagtggaac aantccactg taactagatt gatctatgca cttttcttgc 200
 ttgttgagat atgtgtagct tgtgtaatgt tgataccagg aatggaagaa 250
 caactgaata agattcctgg attttgtgag aatgagaaaag gtgttgcccc 300
 ttgtaacatt ttggttggt ataaagctgt atatcgtttg tgctttgggt 350
 tggctatgtt ctatcttctt ctctctttac taatgatcaa agtgaagagt 400

agcagtgatc ctagagctgc agtgcacaaat ggatttttgt tcttttaaatt 450

tgctgcagca attgcaatta ttattggggc 480

<210> 75

<211> 438

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 32, 65, 92, 121, 142, 154, 170, 293, 315, 323

<223> unknown base

<400> 75

gttattgtga actttgtgga gatgggaggt cntggggctg tgttccatgg 50

cgagctggat accangtttg tgtggaagtg cccogtgttt gntatgccga 100

tgctgtccta gtggaaacaa ntccactgta attagattga tntatgcact 150

ttntttgctt gttggagtan gtgtagcttg tgtaatgttg ataccaggaa 200

tggaagaaca actgaataag attcctggat tttgtgagaa tgagaaaggt 250

gttgtccctt gtaacatttt ggttggctat aaagctgtat atngtttgtg 300

ctttggtttg gctangttct atnttcttct ctctttacta atgatcaaag 350

tgaagagtag cagtgatcct agagctgcag tgcacaatgg attttggttt 400

tttaaatttg ctgcagcaat tgcaattatt attggggc 438

<210> 76

<211> 473

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 48

<223> unknown base

<400> 76

aagaagctgt ctccatcttg tctgtatccg ctgctcttgt gaacgttntg 50

gagatgggga gcgtccttgg ggttgtgctc catggcgagc tggataccat 100

gtttgtgtgg aagtgccccg tgtttgctat gcogatgctg tcctagtggga 150

aacaactcca ctgtaactag attgatctat gcacttttct tgcttggttg 200

agtatgtgta gcttgtgtaa tgttgatacc aggaatggaa gaacaactga 250

ataagattcc tggattttgt gagaatgaga aagggtgttg cccttgtaac 300

attttggttg gctataaagc tgtatatcgt ttgtgctttg gtttggctat 350

gttctatctt cttctctctt tactaatgat caaagtgaag agtagcagt 400

atcctagagc tgcagtgcac aatggatttt gggtctttta atttgctgca 450

gcaattgcaa ttattatttg ggc 473

<210> 77
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 21, 111
<223> unknown base

<400> 77
gctgtcctta gtggaaacaa ntccaacttg taacttggat tgatctatgc 50
actttttcct tgcttggttg agtatgtgta gctttgtgta atgttggtcc 100
caggattgga ngaacaactg aataagattc ctggattttt gtgagaatga 150
gaaaggtggt gtccccttgt aacatttttg gttggctata aagctgtata 200
tcgtttgtgc tttggtttg ctatgttcta tcttcttctc tctttactaa 250
tgatcaaagt gaagagtagc agtgatccta gagctgcagt gcacaatgga 300
ttttggttct ttaaatttgc tgcagcaatt gcaattatta ttggggcatt 350
cttcattcca gaaggaactt ttacaactgt gtggttttat gtaggcatgg 400
cagggtgcctt ttgtttcatc ctcatacaac tagtcttact tattgatttt 450
gcacattcat ggaatgaatc gtgggttgaa aaaatggaag aagggaactc 500
gagatgttgg tatgcagcct tgttatcagc tacagctctg aattatctgc 550
tgtctttagt tgctatcgtc ctgttctttg tctactacac tcatccagcc 600
agttgttcag aaaacaaggc gttcatcagt gtcaacatgc tcctctgcgt 650
tggtgcttct gtaatg 666

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 78
atgtttgtgt ggaagtgccc cg 22

<210> 79
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 79
gtcaacatgc tcctctgc 18

<210> 80
<211> 26

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 80
aatccattgt gcactgcagc tctagg 26

<210> 81
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
gagcatgcca ccactggact gac 23

<210> 82
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 82
gccgatgctg tcctagtgga aacaactcca ctgtaactag attgatctat 50

gcac 54

<210> 83
<211> 3906
<212> DNA
<213> Homo sapiens

<400> 83
ctcgggcgcg cacaggcagc tcggtttgcc ctgcgattga gctgcgggtc 50
gcggccgcgc ccggcctctc caatggcaaa tgtgtgtggc tggaggcgag 100
cgcgaggctt tcggcaaagg cagtcgagtg tttgcagacc ggggcgagtc 150
ctgtgaaagc agataaaaaga aaacatttat taacgtgtca ttacgagggg 200
agcgcccggc cggggctgtc gcactccccg cggaacattt ggctccctcc 250
agctccgaga gaggagaaga agaaagcgga aaagaggcag attcacgtcg 300
tttccagcca agtggacctg atcgatggcc ctctgaatt tatcacgata 350
tttgatttat tagcgatgcc cctgggtttg tgtgttacgc acacacacgt 400
gcacacaagg ctctggctcg ctccctccc tcgtttccag ctctggggcg 450
aatcccacat ctgtttcaac tctccgcoga gggcgagcag gagcgagagt 500
gtgtcgaatc tgcgagtga gagggacgag ggaaaagaaa caaagccaca 550
gacgcaactt gagactcccc catcccaaaa gaagcaccag atcagcaaaa 600

aaagaagatg ggccccccga gcctcgtgct gtgcttgctg tccgcaactg 650
tggttctccct gctgggtgga agctcggcct tctgtgcga ccaccgcctg 700
aaaggcaggt tttagaggga ccgcaggaac atccgccccca acatcatcct 750
ggtgctgacg gacgaccagg atgtggagct gggttccatg caggtgatga 800
acaagacccg gcgcatcatg gagcagggcg gggcgcaactt catcaacgcc 850
ttcgtgacca caccatgtg ctgcccctca cgctcctcca tctcactgg 900
caagtacgtc cacaaccaca acacctacac caacaatgag aactgtcct 950
cgccctcctg gcaggcacag cagcagagcc gcacctttgc cgtgtacctc 1000
aatagcactg gctaccggac agctttcttc ggggaagtatc ttaatgaata 1050
caacggctcc tacgtgccac ccggttgga ggagtgggtc ggactcctta 1100
aaaactcccg cttttataac tacacgctgt gtcggaacgg ggtgaaagag 1150
aagcacggct ccgactactc caaggattac ctacagacc tcatcaccaa 1200
tgacagcgtg agcttcttcc gcacgtccaa gaagatgtac ccgcacaggc 1250
cagtcctcat ggtcatcagc catgcagccc cccacggccc tgaggattca 1300
gccccacaat attcacgcct cttcccaaac gcattctcagc acatcacgcc 1350
gagctacaac tacgcgcccc acccggacaa aactggatc atgcgctaca 1400
cggggcccat gaagcccac caccatggaat tcaccaacat gctccagcgg 1450
aagcgcttgc agacctcat gtcggtggac gactccatgg agacgattta 1500
caacatgctg gttgagacgg gcgagctgga caacacgtac atcgtataca 1550
ccgccgacca cggttaccac atcggccagt ttggcctggt gaaagggaaa 1600
tccatgccat atgagtttga catcagggtc ccgttctacg tgaggggccc 1650
caacgtggaa gccggtgtc tgaatcccca catcgtcctc aacattgacc 1700
tggccccac catcctggac attgcaggcc tggacatacc tgcggatatg 1750
gacgggaaat ccacctcaa gctgctggac acggagcggc cggatgaatc 1800
gtttcacttg aaaaagaaga tgaggggtctg gcgggactcc ttcttggtgg 1850
agagaggcaa gctgctacac aagagagaca atgacaagggt ggacgccag 1900
gaggagaact ttctgcccc gtagcagcgt gtgaaggacc tgtgtcagcg 1950
tgctgagtac cagacggcgt gtgagcagct gggacagaag tggcagtgtg 2000
tggaggacgc cacggggaag ctgaagctgc ataagtcaa gggcccatg 2050
cggtgggcg gcagcagagc cctctccaac ctcgtgcca agtactacgg 2100
gcagggcagc gaggcctgca cctgtgacag cggggactac aagctcagcc 2150
tggccggacg ccggaaaaaa ctcttcaaga agaagtacaa ggccagctat 2200

gtccgcagtc gctccatccg ctcaagtggcc atcgaggtgg acggcaggggt 2250
gtaccacgta ggcctgggtg atgccgcca gccccgaaac ctcaccaagc 2300
ggcactggcc agggggcccct gaggaccaag atgacaagga tgggtggggac 2350
ttcagtggca ctggaggcct tcccgaactac tcagccgcca accccattaa 2400
agtgacacat cgggtgctaca tcttagagaa cgacacagtc cagtgtgacc 2450
tggacctgta caagtccttg caggcctgga aagaccacaa gctgcacatc 2500
gaccacgaga ttgaaaccct gcagaacaaa attaagaacc tgaggggaagt 2550
ccgaggtcac ctgaagaaaa agcggccaga agaattgtgac tgtcacaaaa 2600
tcagctacca caccagcac aaaggccgcc tcaagcacag aggtccagt 2650
ctgcatcctt tcaggaaggg cctgcaagag aaggacaagg tgtggctgtt 2700
gcgggagcag aagcgcaaga agaaactccg caagctgctc aagcgctgc 2750
agaacaacga cacgtgcagc atgccaggcc tcacgtgctt caccacgac 2800
aaccagcact ggcagacggc gcctttcttg aactggggc ctttctgtgc 2850
ctgcaccagc gccacaata acacgtactg gtgcatgagg accatcaatg 2900
agactcaciaa tttcctcttc tgtgaatttg caactggctt cctagagtac 2950
tttgatctca acacagaccc ctaccagctg atgaatgcag tgaacacact 3000
ggacagggat gtctcaacc agctacacgt acagctcatg gagctgagga 3050
gctgcaaggg ttacaagcag tgtaaccccc ggactcgaaa catggacctg 3100
gatggaggaa gctatgagca atacaggcag tttcagcgtc gaaagtggcc 3150
agaaatgaag agaccttctt ccaaatcact gggacaactg tgggaaggct 3200
gggaaggtta agaaacaaca gaggtggacc tccaaaaaca tagaggcatc 3250
acctgactgc acaggcaatg aaaaaccatg tgggtgattt ccagcagacc 3300
tgtgctattg gccaggaggc ctgagaaagc aagcacgcac tctcagtcaa 3350
catgacagat tctggaggat aaccagcagg agcagagata acttcaggaa 3400
gtccatTTTT gcccctgctt ttgctttgga ttatacctca ccagctgcac 3450
aaaatgcatt ttttogtata aaaaagtcac cactaaccct cccccagaag 3500
ctcacaaagg aaaacggaga gagcgagcga gagagatttc cttggaaatt 3550
tctccaagg gcgaaagtca ttggaatttt taaatcatag gggaaaagca 3600
gtcctgttct aaatcctctt attcttttgg tttgtcacia agaaggaact 3650
aagaagcagg acagaggcaa cgtggagagg ctgaaaacag tgacagagacg 3700
tttgacaatg agtcagtagc aaaaagaga tgacatttac ctagcactat 3750
aaacctgggt tgcctctgaa gaaactgcct tcattgtata tatgtgacta 3800

tttacatgta atcaacatgg gaacttttag gggaaacctaa taagaaatcc 3850
 caattttcag gagtgggtgt gtcaataaac gctctgtggc cagtgtaaaa 3900
 gaaaaa 3906

<210> 84
 <211> 867
 <212> PRT
 <213> Homo sapiens

<400> 84
 Met Gly Pro Pro Ser Leu Val Leu Cys Leu Leu Ser Ala Thr Val
 1 5 10 15
 Phe Ser Leu Leu Gly Gly Ser Ser Ala Phe Leu Ser His His Arg
 20 25 30
 Leu Lys Gly Arg Phe Gln Arg Asp Arg Arg Asn Ile Arg Pro Asn
 35 40 45
 Ile Ile Leu Val Leu Thr Asp Asp Gln Asp Val Glu Leu Gly Ser
 50 55 60
 Met Gln Val Met Asn Lys Thr Arg Arg Ile Met Glu Gln Gly Gly
 65 70 75
 Ala His Phe Ile Asn Ala Phe Val Thr Thr Pro Met Cys Cys Pro
 80 85 90
 Ser Arg Ser Ser Ile Leu Thr Gly Lys Tyr Val His Asn His Asn
 95 100 105
 Thr Tyr Thr Asn Asn Glu Asn Cys Ser Ser Pro Ser Trp Gln Ala
 110 115 120
 Gln His Glu Ser Arg Thr Phe Ala Val Tyr Leu Asn Ser Thr Gly
 125 130 135
 Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly
 140 145 150
 Ser Tyr Val Pro Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys
 155 160 165
 Asn Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys
 170 175 180
 Glu Lys His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu
 185 190 195
 Ile Thr Asn Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met
 200 205 210
 Tyr Pro His Arg Pro Val Leu Met Val Ile Ser His Ala Ala Pro
 215 220 225
 His Gly Pro Glu Asp Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro
 230 235 240
 Asn Ala Ser Gln His Ile Thr Pro Ser Tyr Asn Tyr Ala Pro Asn
 245 250 255

Pro	Asp	Lys	His	Trp	Ile	Met	Arg	Tyr	Thr	Gly	Pro	Met	Lys	Pro	260	265	270
Ile	His	Met	Glu	Phe	Thr	Asn	Met	Leu	Gln	Arg	Lys	Arg	Leu	Gln	275	280	285
Thr	Leu	Met	Ser	Val	Asp	Asp	Ser	Met	Glu	Thr	Ile	Tyr	Asn	Met	290	295	300
Leu	Val	Glu	Thr	Gly	Glu	Leu	Asp	Asn	Thr	Tyr	Ile	Val	Tyr	Thr	305	310	315
Ala	Asp	His	Gly	Tyr	His	Ile	Gly	Gln	Phe	Gly	Leu	Val	Lys	Gly	320	325	330
Lys	Ser	Met	Pro	Tyr	Glu	Phe	Asp	Ile	Arg	Val	Pro	Phe	Tyr	Val	335	340	345
Arg	Gly	Pro	Asn	Val	Glu	Ala	Gly	Cys	Leu	Asn	Pro	His	Ile	Val	350	355	360
Leu	Asn	Ile	Asp	Leu	Ala	Pro	Thr	Ile	Leu	Asp	Ile	Ala	Gly	Leu	365	370	375
Asp	Ile	Pro	Ala	Asp	Met	Asp	Gly	Lys	Ser	Ile	Leu	Lys	Leu	Leu	380	385	390
Asp	Thr	Glu	Arg	Pro	Val	Asn	Arg	Phe	His	Leu	Lys	Lys	Lys	Met	395	400	405
Arg	Val	Trp	Arg	Asp	Ser	Phe	Leu	Val	Glu	Arg	Gly	Lys	Leu	Leu	410	415	420
His	Lys	Arg	Asp	Asn	Asp	Lys	Val	Asp	Ala	Gln	Glu	Glu	Asn	Phe	425	430	435
Leu	Pro	Lys	Tyr	Gln	Arg	Val	Lys	Asp	Leu	Cys	Gln	Arg	Ala	Glu	440	445	450
Tyr	Gln	Thr	Ala	Cys	Glu	Gln	Leu	Gly	Gln	Lys	Trp	Gln	Cys	Val	455	460	465
Glu	Asp	Ala	Thr	Gly	Lys	Leu	Lys	Leu	His	Lys	Cys	Lys	Gly	Pro	470	475	480
Met	Arg	Leu	Gly	Gly	Ser	Arg	Ala	Leu	Ser	Asn	Leu	Val	Pro	Lys	485	490	495
Tyr	Tyr	Gly	Gln	Gly	Ser	Glu	Ala	Cys	Thr	Cys	Asp	Ser	Gly	Asp	500	505	510
Tyr	Lys	Leu	Ser	Leu	Ala	Gly	Arg	Arg	Lys	Lys	Leu	Phe	Lys	Lys	515	520	525
Lys	Tyr	Lys	Ala	Ser	Tyr	Val	Arg	Ser	Arg	Ser	Ile	Arg	Ser	Val	530	535	540
Ala	Ile	Glu	Val	Asp	Gly	Arg	Val	Tyr	His	Val	Gly	Leu	Gly	Asp	545	550	555
Ala	Ala	Gln	Pro	Arg	Asn	Leu	Thr	Lys	Arg	His	Trp	Pro	Gly	Ala	560	565	570

Pro	Glu	Asp	Gln	Asp	Asp	Lys	Asp	Gly	Gly	Asp	Phe	Ser	Gly	Thr	575	580	585
Gly	Gly	Leu	Pro	Asp	Tyr	Ser	Ala	Ala	Asn	Pro	Ile	Lys	Val	Thr	590	595	600
His	Arg	Cys	Tyr	Ile	Leu	Glu	Asn	Asp	Thr	Val	Gln	Cys	Asp	Leu	605	610	615
Asp	Leu	Tyr	Lys	Ser	Leu	Gln	Ala	Trp	Lys	Asp	His	Lys	Leu	His	620	625	630
Ile	Asp	His	Glu	Ile	Glu	Thr	Leu	Gln	Asn	Lys	Ile	Lys	Asn	Leu	635	640	645
Arg	Glu	Val	Arg	Gly	His	Leu	Lys	Lys	Lys	Arg	Pro	Glu	Glu	Cys	650	655	660
Asp	Cys	His	Lys	Ile	Ser	Tyr	His	Thr	Gln	His	Lys	Gly	Arg	Leu	665	670	675
Lys	His	Arg	Gly	Ser	Ser	Leu	His	Pro	Phe	Arg	Lys	Gly	Leu	Gln	680	685	690
Glu	Lys	Asp	Lys	Val	Trp	Leu	Leu	Arg	Glu	Gln	Lys	Arg	Lys	Lys	695	700	705
Lys	Leu	Arg	Lys	Leu	Leu	Lys	Arg	Leu	Gln	Asn	Asn	Asp	Thr	Cys	710	715	720
Ser	Met	Pro	Gly	Leu	Thr	Cys	Phe	Thr	His	Asp	Asn	Gln	His	Trp	725	730	735
Gln	Thr	Ala	Pro	Phe	Trp	Thr	Leu	Gly	Pro	Phe	Cys	Ala	Cys	Thr	740	745	750
Ser	Ala	Asn	Asn	Asn	Thr	Tyr	Trp	Cys	Met	Arg	Thr	Ile	Asn	Glu	755	760	765
Thr	His	Asn	Phe	Leu	Phe	Cys	Glu	Phe	Ala	Thr	Gly	Phe	Leu	Glu	770	775	780
Tyr	Phe	Asp	Leu	Asn	Thr	Asp	Pro	Tyr	Gln	Leu	Met	Asn	Ala	Val	785	790	795
Asn	Thr	Leu	Asp	Arg	Asp	Val	Leu	Asn	Gln	Leu	His	Val	Gln	Leu	800	805	810
Met	Glu	Leu	Arg	Ser	Cys	Lys	Gly	Tyr	Lys	Gln	Cys	Asn	Pro	Arg	815	820	825
Thr	Arg	Asn	Met	Asp	Leu	Asp	Gly	Gly	Ser	Tyr	Glu	Gln	Tyr	Arg	830	835	840
Gln	Phe	Gln	Arg	Arg	Lys	Trp	Pro	Glu	Met	Lys	Arg	Pro	Ser	Ser	845	850	855
Lys	Ser	Leu	Gly	Gln	Leu	Trp	Glu	Gly	Trp	Glu	Gly				860	865	

<210> 85
 <211> 19
 <212> DNA

<213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 85
 gaagccggct gtctgaatc 19
 <210> 86
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 86
 ggccagctat ctccgcag 18
 <210> 87
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 87
 aagggcctgc aagagaag 18
 <210> 88
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 88
 cactgggaca actgtggg 18
 <210> 89
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 89
 cagaggcaac gtggagag 18
 <210> 90
 <211> 21
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 90
 aagtattgtc atacagtgtt c 21

<210> 91
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 91
tagtacttgg gcacgagggt ggag 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 92
tcataccaac tgctgggtcat tggc 24

<210> 93
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 93
ctcaagctgc tggacacgga gcggccggtg aatcggtttc acttg 45

<210> 94
<211> 971
<212> DNA
<213> Homo sapiens

<400> 94
aacaaagttc agtgactgag agggctgagc ggaggctgct gaaggggaga 50
aaggagtgag gagctgctgg gcagagaggg actgtccggc tcccagatgc 100
tgggcctcct ggggagcaca gccctcgtgg gatggatcac aggtgctgct 150
gtggcggtcc tgctgctgct gctgctgctg gccacctgcc ttttcacgg 200
acggcaggac tgtgacgtgg agaggaaccg tacagctgca gggggaaacc 250
gagtcgcccg ggcccagcct tggcccttcc ggcggcgggg ccacctggga 300
atctttcacc atcacctgca tcttgccac gtatctcatg tgccgaatgt 350
gggcctccac caccaccacc acccccgcca caccctcac cacctccacc 400
accaccacca cccccaccgc caccatcccc gccacgctcg ctgaggctgc 450
tgtcgccggt gcctgtggac agcagctgcc cctgccctcc catctgttcc 500
caggacaagt ggaccccatg tttccatgtg gaaggatgca tctctgggg 550
gaacgagggg aacaatagac tggggcttgc tccagctgca tttgatggc 600

atgccccagt gtactatggc agcagagaat ggaggaacac tgggtctgca 650
 gtgctgaagg gtttggggag tggagagcaa ggggtgctctt tcggggctgg 700
 acagcccgtc ttgtgacagt gactcccagt gagccccaga aatgacaagc 750
 gtgtcttggc agagccagca cacaagtgga tgtgaagtgc cgtcttgac 800
 ctccatcatca ggctgctgca ggcctctggc gggcagggca ctgggagagg 850
 ccctgagaat gtccttttgg tttggagaag gcagtgtgag gctgcacagt 900
 caattcatcg gtgccttagt ccaagaaaat aaaaaccact aagaagcttt 950
 aaaaaaaaaa aaaaaaaaaa a 971

<210> 95
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 95
 Met Leu Gly Leu Leu Gly Ser Thr Ala Leu Val Gly Trp Ile Thr
 1 5 10 15
 Gly Ala Ala Val Ala Val Leu Leu Leu Leu Leu Leu Ala Thr
 20 25 30
 Cys Leu Phe His Gly Arg Gln Asp Cys Asp Val Glu Arg Asn Arg
 35 40 45
 Thr Ala Ala Gly Gly Asn Arg Val Arg Arg Ala Gln Pro Trp Pro
 50 55 60
 Phe Arg Arg Arg Gly His Leu Gly Ile Phe His His His Arg His
 65 70 75
 Pro Gly His Val Ser His Val Pro Asn Val Gly Leu His His His
 80 85 90
 His His Pro Arg His Thr Pro His His Leu His His His His His
 95 100 105
 Pro His Arg His His Pro Arg His Ala Arg
 110 115

<210> 96
 <211> 1312
 <212> DNA
 <213> Homo sapiens

<400> 96
 ggcggctgct gagctgcctt gaggtgcagt gttggggatc cagagccatg 50
 tcggacctgc tactactggg cctgattggg ggcctgactc tcttactgct 100
 gctgacgctg ctggcctttg ccgggtactc agggctactg gctgggggtgg 150
 aagtgagtgc tgggtcaccc cccatccgca acgtcactgt ggcctacaag 200
 ttccacatgg ggctctatgg tgagactggg cggcttttca ctgagagctg 250
 cagcatctct cccaagctcc gotccatgc tgtctactat gacaaccccc 300

acatggtgcc ccctgataag tgccgatgtg ccgtgggcag catcctgagt 350
 gaaggtgagg aatcgccctc ccctgagctc atcgacctct accagaaatt 400
 tggcttcaag gtgtttctct tcccggcacc cagccatgtg gtgacagcca 450
 cttcccccta caccaccatt ctgtccatct ggctggctac ccgccgtgtc 500
 catcctgcct tggacaccta catcaaggag cggaagctgt gtgcctatcc 550
 tcggctggag atctaccagg aagaccagat ccatttcatg tgcccactgg 600
 cacggcaggg agacttctat gtgcctgaga tgaaggagac agagtggaaa 650
 tggcgggggc ttgtggaggc cattgacacc caggtggatg gcacaggagc 700
 tgacacaatg agtgacacga gttctgtaag cttggaagtg agccctggca 750
 gccgggagac ttcagctgcc acactgtcac ctggggcgag cagccgtggc 800
 tgggatgacg gtgacacccg cagcgagcac agctacagcg agtcaggtgc 850
 cagcggctcc tcttttgagg agctggactt ggagggcgag gggcccttag 900
 gggagtcacg gctggaccct gggactgagc ccctggggac taccaagtgg 950
 ctctgggagc cactgcccc tgagaagggc aaggagtaac ccatggcctg 1000
 caccctctctg cagtgcagtt gctgaggaac tgagcagact ctccagcaga 1050
 ctctccagcc ctcttctctc ttctcttggg ggaggagggg ttcttgaggg 1100
 acctgacttc ccctgtcca ggcctcttgc taagccttct cctcactgcc 1150
 ctttaggctc ccagggccag aggagccagg gactattttc tgcaccagcc 1200
 cccagggctg ccgccctgt tgtgtctttt tttcagactc acagtggagc 1250
 ttccaggacc cagaataaag ccaatgattt acttgtttca cctggaaaaa 1300
 aaaaaaaaaa aa 1312

<210> 97
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 97
 Met Ser Asp Leu Leu Leu Gly Leu Ile Gly Gly Leu Thr Leu
 1 5 10 15
 Leu Leu Leu Leu Thr Leu Leu Ala Phe Ala Gly Tyr Ser Gly Leu
 20 25 30
 Leu Ala Gly Val Glu Val Ser Ala Gly Ser Pro Pro Ile Arg Asn
 35 40 45
 Val Thr Val Ala Tyr Lys Phe His Met Gly Leu Tyr Gly Glu Thr
 50 55 60
 Gly Arg Leu Phe Thr Glu Ser Cys Ser Ile Ser Pro Lys Leu Arg
 65 70 75

Ser Ile Ala Val Tyr Tyr Asp Asn Pro His Met Val Pro Pro Asp
 80 85 90
 Lys Cys Arg Cys Ala Val Gly Ser Ile Leu Ser Glu Gly Glu Glu
 95 100 105
 Ser Pro Ser Pro Glu Leu Ile Asp Leu Tyr Gln Lys Phe Gly Phe
 110 115 120
 Lys Val Phe Ser Phe Pro Ala Pro Ser His Val Val Thr Ala Thr
 125 130 135
 Phe Pro Tyr Thr Thr Ile Leu Ser Ile Trp Leu Ala Thr Arg Arg
 140 145 150
 Val His Pro Ala Leu Asp Thr Tyr Ile Lys Glu Arg Lys Leu Cys
 155 160 165
 Ala Tyr Pro Arg Leu Glu Ile Tyr Gln Glu Asp Gln Ile His Phe
 170 175 180
 Met Cys Pro Leu Ala Arg Gln Gly Asp Phe Tyr Val Pro Glu Met
 185 190 195
 Lys Glu Thr Glu Trp Lys Trp Arg Gly Leu Val Glu Ala Ile Asp
 200 205 210
 Thr Gln Val Asp Gly Thr Gly Ala Asp Thr Met Ser Asp Thr Ser
 215 220 225
 Ser Val Ser Leu Glu Val Ser Pro Gly Ser Arg Glu Thr Ser Ala
 230 235 240
 Ala Thr Leu Ser Pro Gly Ala Ser Ser Arg Gly Trp Asp Asp Gly
 245 250 255
 Asp Thr Arg Ser Glu His Ser Tyr Ser Glu Ser Gly Ala Ser Gly
 260 265 270
 Ser Ser Phe Glu Glu Leu Asp Leu Glu Gly Glu Gly Pro Leu Gly
 275 280 285
 Glu Ser Arg Leu Asp Pro Gly Thr Glu Pro Leu Gly Thr Thr Lys
 290 295 300
 Trp Leu Trp Glu Pro Thr Ala Pro Glu Lys Gly Lys Glu
 305 310

<210> 98
 <211> 725
 <212> DNA
 <213> Homo sapiens

<400> 98
 ccgcgggaac gctgtcctgg ctgccgccac ccgaacagcc tgtcctggtg 50
 ccccggtctc ctgccccgcg ccagtcattg accctgcgcc cctcactcct 100
 cccgctccat ctgctgctgc tgctgctgct cagtgcggcg gtgtgccggg 150
 ctgaggctgg gctcgaaacc gaaagtcccg tccggaccct ccaagtggag 200
 accctggtgg agccccaga accatgtgcc gagcccgtg cttttggaga 250

cacgcttcac atacactaca cggaagcgtt ggtagatgga cgtattattg 300
 acacctccct gaccagagac cctctgggta tagaacttgg ccaaaagcag 350
 gtgattccag gtctggagca gagtcttctc gacatgtgtg tgggagagaa 400
 gcgaagggca atcattcctt ctcaattggc ctatggaaaa cggggatttc 450
 caccatctgt cccagcggat gcagtgggtc agtatgacgt ggagctgatt 500
 gcactaatcc gagccaacta ctggctaaag ctggtgaagg gcattttgcc 550
 tctggtaggg atggccatgg tgccagccct cctgggcctc attgggtatc 600
 acctatacag aaaggccaat agacccaaag tctccaaaaa gaagctcaag 650
 gaagagaaac gaaacaagag caaaaagaaa taataaataa taaattttaa 700
 aaaacttaaa aaaaaaaaaa aaaaa 725

<210> 99
 <211> 201
 <212> PRT
 <213> Homo sapiens

<400> 99
 Met Thr Leu Arg Pro Ser Leu Leu Pro Leu His Leu Leu Leu Leu
 1 5 10 15
 Leu Leu Leu Ser Ala Ala Val Cys Arg Ala Glu Ala Gly Leu Glu
 20 25 30
 Thr Glu Ser Pro Val Arg Thr Leu Gln Val Glu Thr Leu Val Glu
 35 40 45
 Pro Pro Glu Pro Cys Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu
 50 55 60
 His Ile His Tyr Thr Gly Ser Leu Val Asp Gly Arg Ile Ile Asp
 65 70 75
 Thr Ser Leu Thr Arg Asp Pro Leu Val Ile Glu Leu Gly Gln Lys
 80 85 90
 Gln Val Ile Pro Gly Leu Glu Gln Ser Leu Leu Asp Met Cys Val
 95 100 105
 Gly Glu Lys Arg Arg Ala Ile Ile Pro Ser His Leu Ala Tyr Gly
 110 115 120
 Lys Arg Gly Phe Pro Pro Ser Val Pro Ala Asp Ala Val Val Gln
 125 130 135
 Tyr Asp Val Glu Leu Ile Ala Leu Ile Arg Ala Asn Tyr Trp Leu
 140 145 150
 Lys Leu Val Lys Gly Ile Leu Pro Leu Val Gly Met Ala Met Val
 155 160 165
 Pro Ala Leu Leu Gly Leu Ile Gly Tyr His Leu Tyr Arg Lys Ala
 170 175 180
 Asn Arg Pro Lys Val Ser Lys Lys Lys Leu Lys Glu Glu Lys Arg

Asn Lys Ser Lys Lys Lys
200

<210> 100

<211> 705

<212> DNA

<213> Homo sapiens

<400> 100

cccgggaacg tgttcctggc tgccgcaccc gaacagcctg tcctggtgcc 50
ccggtccct gccccgcgcc cagtcacgac cctgcgcccc tcaactcctcc 100
cgctccatct gctgctgctg ctgctgctca gtgcggcggt gtgccgggct 150
gaggctgggc tcgaaaccga aagtcccgtc cggaccctcc aagtggagac 200
cctggtggag cccccagaac catgtgccga gcccgctgct tttggagaca 250
cgcttcacat aactacacg ggaagcttgg tagatggacg tattattgac 300
acctccctga ccagagaccc tctggttata gaacttggcc aaaagcaggt 350
gattccaggt ctggagcaga gtcttctcga catgtgtgtg ggagagaagc 400
gaagggcaat cattccttct cacttggcct atggaaaacg gggatttcca 450
ccatctgtcc cagcggatgc agtgggtgcag tatgacgtgg agctgattgc 500
actaatccga gccaaactact ggctaaagct ggtgaagggc attttgcctc 550
tggtagggat ggccatgggt ccaccctcct gggcctcatt gggatcacc 600
tatacagaaa ggccaataga cccaaagtct ccaaaaagaa gctcaaggaa 650
gagaaacgaa acaagagcaa aaagaaataa taaataataa attttaaaaa 700
actta 705

<210> 101

<211> 543

<212> DNA

<213> Homo sapiens

<400> 101

ccgaaagtcc cgtccggacc ctccaagtgg agaccctggt ggagccccc 50
gaaccatgtg ccgagccgc tgcttttgga gacacgcttc acatacacta 100
cacgggaagc ttggtagatg gacgtattat tgacacctcc ctgaccagag 150
accctctggt tatagaactt ggccaaaagc aggtgattcc aggtctggag 200
cagagtcttc tcgacatgtg tgtgggagag aagcgaaggg caatcattcc 250
ttctcacttg gcctatggaa aacggggatt tccaccatct gtcccagcgg 300
atgcagtggg gcagtatgac gtggagctga ttgcactaat ccgagccaac 350
tactggctaa agctggtgaa gggcattttg cctctggtag ggatggccat 400

ggtgccagcc ctcttgggcc tcattgggta tcacctatac agaaaggcca 450
 atagacccaa agtctccaaa aagaagctca aggaagagaa acgaaacaag 500
 agcaaaaaga aataataaat aataaatttt aaaaaactta aaa 543

<210> 102

<211> 1316

<212> DNA

<213> Homo sapiens

<400> 102

ctgctgcatc cgggtgtctg gaggtgtgg ccgttttgtt ttcttggcta 50
 aaatcggggg agtgaggcgg gccggcgcg cgcgacaccg ggctccggaa 100
 ccactgcacg acggggctgg actgacctga aaaaaatgtc tggatttcta 150
 gagggcttga gatgctcaga atgcattgac tggggggaaa agcgcaatac 200
 tattgcttcc attgctgctg gtgtactatt ttttacaggc tgggtggatta 250
 tcatagatgc agctgttatt tatcccacca tgaaagattt caaccactca 300
 taccatgcct gtggtgttat agcaaccata gccttcctaa tgattaatgc 350
 agtatcgaat ggacaagtcc gaggtgatag ttacagtga ggttgtctgg 400
 gtcaaacagg tgctcgcat tggcttttcg ttggtttcat gttggccttt 450
 ggatctctga ttgcatctat gtggattcct tttggagggt atgttgctaa 500
 agaaaaagac atagtatacc ctggaattgc tgtatttttc cagaatgcct 550
 tcatcttttt tggagggtcg gtttttaagt ttggccgcac tgaagactta 600
 tggcagtga cacaatctgat tcccacagc acaacagccc tgcattgggt 650
 tgtttgtttt ttactgctc actcccaccc ttttgtaatg ccattttcta 700
 aacttatttc tgagtgtagt ctgagcttaa agttgtgtaa tactaaaatc 750
 acgagaacac ctaacaaca accaaaaatc tattgtggta tgcacttgat 800
 taacttataa aatgttagag gaaactttca catgaataat ttttgtaaaa 850
 ttttatcatg gtataatttg taaaaataaa aagaaattac aaaagaaatt 900
 atggatttgt caatgtaagt atttgcata tctgagggtc aaaaccacaa 950
 tgaaagtgct ctgaagattt aatgtgttta ttcaaattgt gtctcttctg 1000
 tgtcaaattg taaatgaaat ataaacattt tttagttttt aaaatattcc 1050
 gtggtcaaaa ttcttcctca ctataattgg tatttacttt taccaaaaat 1100
 tctgtgaaca tgtaattgaa ctggcctttg aggggtctcc aaggggtgag 1150
 tggacgtgtt ggaagagaga agcaccatgg tccagccacc aggtccctg 1200
 tgtcccttcc atgggaaggt cttccgctgt gcctctcatt ccaagggcag 1250
 gaagatgtga ctgagccatg acacgtgggt ctggtgggat gcacagtcac 1300

tccacatcca ccactg 1316

<210> 103

<211> 157

<212> PRT

<213> Homo sapiens

<400> 103

Met Ser Gly Phe Leu Glu Gly Leu Arg Cys Ser Glu Cys Ile Asp
1 5 10 15

Trp Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val
20 25 30

Leu Phe Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile
35 40 45

Tyr Pro Thr Met Lys Asp Phe Asn His Ser Tyr His Ala Cys Gly
50 55 60

Val Ile Ala Thr Ile Ala Phe Leu Met Ile Asn Ala Val Ser Asn
65 70 75

Gly Gln Val Arg Gly Asp Ser Tyr Ser Glu Gly Cys Leu Gly Gln
80 85 90

Thr Gly Ala Arg Ile Trp Leu Phe Val Gly Phe Met Leu Ala Phe
95 100 105

Gly Ser Leu Ile Ala Ser Met Trp Ile Leu Phe Gly Gly Tyr Val
110 115 120

Ala Lys Glu Lys Asp Ile Val Tyr Pro Gly Ile Ala Val Phe Phe
125 130 135

Gln Asn Ala Phe Ile Phe Phe Gly Gly Leu Val Phe Lys Phe Gly
140 145 150

Arg Thr Glu Asp Leu Trp Gln
155

<210> 104

<211> 545

<212> DNA

<213> Homo sapiens

<400> 104

ttcttggtta aaatcggggg agtgaggcgg gccggcgcg cgcgacaccg 50

ggctccggaa ccactgcacg acggggctgg actgacctga aaaaaatgtc 100

tggatttcta gagggcttga gatgctcaga atgcattgac tgggggggaaa 150

agcgcaatac tattgcttcc attgctgctg gtgtactatt ttttacaggc 200

tgggtgatta tcatagatgc agctgttatt tatcccacca tgaaagattt 250

caaccactca taccatgcct gtggtgttat agcaaccata gccttcttaa 300

tgattaatgc agtatcgaat ggacaagtcc gaggtgatag ttacagtga 350

ggttgtctgg gtcaaacagg tgctcgcatt tggcttttcg ttggtttcat 400

gttggccttt ggatctctga ttgcatctat gtggattctt tttggaggtt 450
 atgttgctaa agaaaaagac atagtatacc ctggaattgc tgtatctttc 500
 cagaatgcct tcatcttttt tggagggctg gtttttaagt ttggc 545

<210> 105
 <211> 490
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 31, 39, 108, 145, 179, 219, 412, 479
 <223> unknown base

<400> 105
 tggacggacc tgaaaaaat gtttggattt ntagaggnt tgagatgttc 50
 agaatgcatg actgggggaa aagcgcaaat actattgctt ccattgctgc 100
 tgggtgtaata ttttttacag gctggtggat tatcatagat gcagntgtta 150
 tttatcccac catgaaagat ttcaaccant cataccatgc ctgtggtgtt 200
 atagcaacca tagccttcnt aatgattaat gcagtatcga atggacaagt 250
 ccgaggtgat agttacagtg aagggtgttt gggtaaaca ggtgctcgca 300
 tttggctttt cgttggtttc atgttggcct ttggatctct gattgcatct 350
 atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 400
 ccctggaatt gntgtatttt tccagaatgc cttcatcttt tttggagggc 450
 tggtttttaa gtttggccgc actgaagant tatggcagtg 490

<210> 106
 <211> 466
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 26, 38, 81, 115, 207, 329, 380, 446, 449
 <223> unknown base

<400> 106
 ggacaccggg ttccggacca atgcangacg ggggtggantg acctgaaaaa 50
 aatgtttgga ttttttagagg gcttgagatg ntcagaatgc attgactggg 100
 ggaaaagcgc aatantattg ctttccattg ctgctggtgt actatctttt 150
 acagggtggt ggattatcat agatgcagct gttatttata ccaccatgaa 200
 agatttnaac cactcatacc atgcctgtgg tgttatagca accatagcct 250
 tcctaataatg taatgcagta tcgaatggac aagtcaggagg tgatagttac 300
 agtgaaggtt gtttgggtca aacaggtgnt cgcatttggc ttttcgttgg 350
 tttcatgttg gcctttggat ttctgattgn attctatgcg gattcttctt 400

ggaggttatg ttgctaaaga aaaagacata gtataccctg gaattnctnt 450

atttttccag aatgcc 466

<210> 107

<211> 377

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 67, 70, 78, 105, 144, 150, 209, 266, 268, 282, 310, 331, 356

<223> unknown base

<400> 107

tagagggtt gagatgctca gaatgcattg actgggggga aaagcgcaat 50

antattgctt ccattgntgn tgggtgnta tttttttaca ggctgggtgga 100

ttatnataga tgcagctgtt atttatccca ccatgaaaga tttnaaccan 150

tcataccatg cctgtggtgt tatagcaacc atagccttcc taatgattaa 200

tgcagtatng aatggacaag tccgagggtga tagttacagt gaagggttgtt 250

tgggtcaaac aggtgntngc atttggcttt tngttggttt catgttggcc 300

tttgatctn tgattgcatt tatgtggatt ntttttggag gttatgttgc 350

taaagnaaaa gacatagtat accctgt 377

<210> 108

<211> 552

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 12, 25, 65, 130, 437, 537

<223> unknown base

<400> 108

gggaggctgt gnccgttttg ttttnttggc taaaatcggg ggagtggaggc 50

ggcccggcgc ggcngacac cgggttccgg gaaccattgc acgacgggggt 100

ggactgacct gaaaaaatg tttggatttn tagagggtt gagatgctca 150

gaatgcattg actgggggga aaagcgcaat actattgctt ccattgctgc 200

tgggtgtacta ttttttacag gctgggtgat tatcatagat gcagctgtta 250

tttatccac catgaaagat ttcaaccact cataccatgc ctgtgggtgtt 300

atagcaacca tagccttcct aatgattaat gcagtatcga atggacaagt 350

ccgagggtgat agttacagtg aagggtgtct ggggtcaaaca ggtgctcgca 400

tttggctttt cgttggtttc atgttggcct ttggatntct gattgcatct 450

atgtggattc tttttggagg ttatgttgct aaagaaaaag acatagtata 500

ccctggaatt gctgtatttt tccagaatgc cttcatnttt tttggagggc 550

tg 552

<210> 109

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 109

gggtggatgg tactgctgca tcc 23

<210> 110

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 110

tgttgctgctg tgggaaatca gatgtg 26

<210> 111

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 111

gtgtctggag gctgtggccg ttttgtttc ttgggctaaa atcggg 46

<210> 112

<211> 3004

<212> DNA

<213> Homo sapiens

<400> 112

cgacgccggc gtgatgtggc ttccgctggg gctgctcctg gctgtgctgc 50

tgtgtggcgt cctctgcaaa gtttacttgg gactattctc tggcagctcc 100

ccgaatcctt tctccgaaga tgtcaaacgg ccccagcgc ccctggtaac 150

tgacaaggag gccaggaaga aggttctcaa acaagctttt tcagccaacc 200

aagtgccgga gaagctggat gtggtggtaa ttggcagtgg ctttgggggc 250

ctggctgcag ctgcaattct agctaaagct ggcaagcgag tcctgggtgt 300

ggaacaacat accaaggcag ggggctgctg tcataccttt ggaagaatg 350

gccttgaatt tgacacagga atccattaca ttgggcgtat ggaagagggc 400

agcattggcc gttttatctt ggaccagatc actgaagggc agctggactg 450

ggctccccctg tcctctcctt ttgacatcat ggtactggaa gggcccaatg 500

gccgaaagga gtaccccatg tacagtggag agaaagccta cattcagggc 550

ctcaaggaga agtttccaca ggaggaagct atcattgaca agtatataaa 600
 gctgggtaag gtggtatcca gtggagcccc tcatgccatc ctgttgaaat 650
 tcctccatt gcccggtggtt cagctcctcg acaggtgtgg gctgctgact 700
 cgtttctctc cattcettca agcatccacc cagagcctgg ctgaggtcct 750
 gcagcagctg ggggcctcct ctgagctcca ggcagtactc agctacatct 800
 tccccactta cgggtgtcacc cccaaccaca gtgccttttc catgcacgcc 850
 ctgctggtca accactacat gaaaggaggc ttttatcccc gaggggggttc 900
 cagtgaaatt gccttcaca ccatccctgt gattcagcgg gctgggggcg 950
 ctgtcctcac aaaggccact gtgcagagtg tgttgctgga ctcagctggg 1000
 aaagcctgtg gtgtcagtgt gaagaagggg catgagctgg tgaacatcta 1050
 ttgccccatc gtggtctcca acgcaggact gttcaacacc tatgaacacc 1100
 tactgccggg gaacgcccgc tgctgccag gtgtgaagca gcaactgggg 1150
 acggtgcggc ccggcttagg catgacctct gttttcatct gcctgcgagg 1200
 caccaaggaa gacctgcatc tgccgtccac caactactat gtttactatg 1250
 acacggacat ggaccaggcg atggagcgt acgtctccat gcccaggga 1300
 gaggtgcgg aacacatccc tcttctcttc ttogctttcc catcagccaa 1350
 agatccgacc tgggaggacc gattcccagg ccggtccacc atgatcatgc 1400
 tcatacccac tgcctacgag tggtttgagg agtggcaggc ggagctgaag 1450
 ggaaagcggg gcagtgaacta tgagaccttc aaaaactcct ttgtggaagc 1500
 ctctatgtca gtggtcctga aactgttccc acagctggag gggaagggtg 1550
 agagtgtgac tgcaggatcc ccactcacca accagttcta tctggctgct 1600
 ccccgagggtg cctgctacgg ggctgaccat gacctgggccc gcctgcaccc 1650
 ttgtgtgatg gcctccttga gggcccagag ccccatcccc aacctctatc 1700
 tgacaggcca ggatatcttc acctgtggac tggtcggggc cctgcaaggt 1750
 gccctgctgt gcagcagcgc catcctgaag cggaaactgt actcagacct 1800
 taagaatctt gattctagga tccgggcaca gaagaaaaag aattagttcc 1850
 atcaggagg agtcagagga atttgccccaa tggctggggc atctcccttg 1900
 acttaccat aatgtctttc tgcattagtt ccttgcacgt ataaagcact 1950
 ctaatttggt tctgatgcct gaagagaggc ctagttttaa tcacaattcc 2000
 gaatctggg caatggaatc actgcttcca gctggggcag gtgagatctt 2050
 tacgcctttt ataacatgcc atccctacta ataggatatt gacttgata 2100
 gcttgatgtc tcatgacgag cggcgctctg catccctcac ccatgcctcc 2150

taactcagtg atcaaagcga atattccatc tgtggataga acccctggca 2200
 gtgttgtcag ctcaacctgg tgggttcagt tctgtcctga ggcttctgct 2250
 ctcatcatt tagtgctacg ctgcacagtt ctacactgtc aagggaaaag 2300
 ggagactaat gaggcttaac tcaaaacctg ggcgtgggtt tggttgccat 2350
 tccatagggtt tggagagctc tagatctctt ttgtgctggg ttcagtggct 2400
 cttcagggga caggaaatgc ctgtgtctgg ccagtgtggg tctggagctt 2450
 tggggtaaca gcaggatcca tcagttagta ggggtgcatgt cagatgatca 2500
 tatccaattc atatggaagt cccgggtctg tcttccttat catcgggggtg 2550
 gcagctgggt ctcaatgtgc cagcagggac tcagtacctg agcctcaatc 2600
 aagccttatc caccaaatac acagggaagg gtgatgcagg gaagggtgac 2650
 atcaggagtc agggcatgga ctggtaagat gaatactttg ctgggctgaa 2700
 gcaggctgca gggcattcca gccaaaggga cagcagggga cagtgcaggg 2750
 aggtgtgggg taaggagggg aagtcacatc agaaaaggga aagccacgga 2800
 atgtgtgtga agccagaaa tggcatttgc agttaattag cacatgtgag 2850
 ggtagacag gtaggtgaat gcaagctcaa ggtttggaaa aatgactttt 2900
 cagttatgtc tttggtatca gacatacgaa aggtctcttt gtagttcgtg 2950
 ttaatgtaac attaataaat ttattgattc cattgcttta aaaaaaaaaa 3000
 aaaa 3004

<210> 113
 <211> 610
 <212> PRT
 <213> Homo sapiens

<400> 113
 Met Trp Leu Pro Leu Val Leu Leu Leu Ala Val Leu Leu Leu Ala
 1 5 10 15
 Val Leu Cys Lys Val Tyr Leu Gly Leu Phe Ser Gly Ser Ser Pro
 20 25 30
 Asn Pro Phe Ser Glu Asp Val Lys Arg Pro Pro Ala Pro Leu Val
 35 40 45
 Thr Asp Lys Glu Ala Arg Lys Lys Val Leu Lys Gln Ala Phe Ser
 50 55 60
 Ala Asn Gln Val Pro Glu Lys Leu Asp Val Val Val Ile Gly Ser
 65 70 75
 Gly Phe Gly Gly Leu Ala Ala Ala Ala Ile Leu Ala Lys Ala Gly
 80 85 90
 Lys Arg Val Leu Val Leu Glu Gln His Thr Lys Ala Gly Gly Cys
 95 100 105

Cys	His	Thr	Phe	Gly	Lys	Asn	Gly	Leu	Glu	Phe	Asp	Thr	Gly	Ile	110	115	120
His	Tyr	Ile	Gly	Arg	Met	Glu	Glu	Gly	Ser	Ile	Gly	Arg	Phe	Ile	125	130	135
Leu	Asp	Gln	Ile	Thr	Glu	Gly	Gln	Leu	Asp	Trp	Ala	Pro	Leu	Ser	140	145	150
Ser	Pro	Phe	Asp	Ile	Met	Val	Leu	Glu	Gly	Pro	Asn	Gly	Arg	Lys	155	160	165
Glu	Tyr	Pro	Met	Tyr	Ser	Gly	Glu	Lys	Ala	Tyr	Ile	Gln	Gly	Leu	170	175	180
Lys	Glu	Lys	Phe	Pro	Gln	Glu	Glu	Ala	Ile	Ile	Asp	Lys	Tyr	Ile	185	190	195
Lys	Leu	Val	Lys	Val	Val	Ser	Ser	Gly	Ala	Pro	His	Ala	Ile	Leu	200	205	210
Leu	Lys	Phe	Leu	Pro	Leu	Pro	Val	Val	Gln	Leu	Leu	Asp	Arg	Cys	215	220	225
Gly	Leu	Leu	Thr	Arg	Phe	Ser	Pro	Phe	Leu	Gln	Ala	Ser	Thr	Gln	230	235	240
Ser	Leu	Ala	Glu	Val	Leu	Gln	Gln	Leu	Gly	Ala	Ser	Ser	Glu	Leu	245	250	255
Gln	Ala	Val	Leu	Ser	Tyr	Ile	Phe	Pro	Thr	Tyr	Gly	Val	Thr	Pro	260	265	270
Asn	His	Ser	Ala	Phe	Ser	Met	His	Ala	Leu	Leu	Val	Asn	His	Tyr	275	280	285
Met	Lys	Gly	Gly	Phe	Tyr	Pro	Arg	Gly	Gly	Ser	Ser	Glu	Ile	Ala	290	295	300
Phe	His	Thr	Ile	Pro	Val	Ile	Gln	Arg	Ala	Gly	Gly	Ala	Val	Leu	305	310	315
Thr	Lys	Ala	Thr	Val	Gln	Ser	Val	Leu	Leu	Asp	Ser	Ala	Gly	Lys	320	325	330
Ala	Cys	Gly	Val	Ser	Val	Lys	Lys	Gly	His	Glu	Leu	Val	Asn	Ile	335	340	345
Tyr	Cys	Pro	Ile	Val	Val	Ser	Asn	Ala	Gly	Leu	Phe	Asn	Thr	Tyr	350	355	360
Glu	His	Leu	Leu	Pro	Gly	Asn	Ala	Arg	Cys	Leu	Pro	Gly	Val	Lys	365	370	375
Gln	Gln	Leu	Gly	Thr	Val	Arg	Pro	Gly	Leu	Gly	Met	Thr	Ser	Val	380	385	390
Phe	Ile	Cys	Leu	Arg	Gly	Thr	Lys	Glu	Asp	Leu	His	Leu	Pro	Ser	395	400	405
Thr	Asn	Tyr	Tyr	Val	Tyr	Tyr	Asp	Thr	Asp	Met	Asp	Gln	Ala	Met	410	415	420

Glu Arg Tyr Val	Ser Met Pro Arg Glu	Glu Ala Ala Glu His	Ile
	425	430	435
Pro Leu Leu Phe	Phe Ala Phe Pro Ser	Ala Lys Asp Pro Thr	Trp
	440	445	450
Glu Asp Arg Phe	Pro Gly Arg Ser Thr	Met Ile Met Leu Ile	Pro
	455	460	465
Thr Ala Tyr Glu	Trp Phe Glu Glu Trp	Gln Ala Glu Leu Lys	Gly
	470	475	480
Lys Arg Gly Ser	Asp Tyr Glu Thr Phe	Lys Asn Ser Phe Val	Glu
	485	490	495
Ala Ser Met Ser	Val Val Leu Lys Leu	Phe Pro Gln Leu Glu	Gly
	500	505	510
Lys Val Glu Ser	Val Thr Ala Gly Ser	Pro Leu Thr Asn Gln	Phe
	515	520	525
Tyr Leu Ala Ala	Pro Arg Gly Ala Cys	Tyr Gly Ala Asp His	Asp
	530	535	540
Leu Gly Arg Leu	His Pro Cys Val Met	Ala Ser Leu Arg Ala	Gln
	545	550	555
Ser Pro Ile Pro	Asn Leu Tyr Leu Thr	Gly Gln Asp Ile Phe	Thr
	560	565	570
Cys Gly Leu Val	Gly Ala Leu Gln Gly	Ala Leu Leu Cys Ser	Ser
	575	580	585
Ala Ile Leu Lys	Arg Asn Leu Tyr Ser	Asp Leu Lys Asn Leu	Asp
	590	595	600
Ser Arg Ile Arg	Ala Gln Lys Lys Lys	Asn	
	605	610	

<210> 114
 <211> 1701
 <212> DNA
 <213> Homo sapiens

<400> 114
 gcagcggcga ggcggcggtg gtggctgagt ccgtggtggc agaggcgaag 50
 gcgacagctc taggggttgg caccggcccc gagaggagga tgcgggtccg 100
 gatagggctg acgctgctgc tgtgtgcggt gctgctgagc ttggcctcgg 150
 cgtcctcgga tgaagaaggc agccaggatg aatccttaga ttccaagact 200
 actttgacat cagatgagtc agtaaaggac catactactg caggcagagt 250
 agttgctggt caaatatttc ttgattcaga agaactctgaa ttagaatcct 300
 ctattcaaga agaggaagac agcctcaaga gccaagaggg ggaaagtgtc 350
 acagaagata tcagctttct agagtctcca aatccagaaa acaaggacta 400
 tgaagagcca aagaaagtac ggaaccagc tttgaccgcc attgaaggca 450

cagcacatgg ggagccctgc cacttccctt ttcttttctt agataaggag 500
tatgatgaat gtacatcaga tgggagggaa gatggcagac tgtggtgtgc 550
tacaacctat gactacaaag cagatgaaaa gtggggcctt tgtgaaactg 600
aagaagaggc tgctaagaga cggcagatgc aggaagcaga aatgatgtat 650
caaaactggaa tgaaaatcct taatggaagc aataagaaaa gccaaaaaag 700
agaagcatat cggatatctc aaaaggcagc aagcatgaac cataccaaag 750
ccctggagag agtgtcatat gctcttttat ttggtgatta cttgccacag 800
aatatccagg cagcgagaga gatgtttgag aagctgactg aggaaggctc 850
tcccaaggga cagactgctc ttggctttct gtatgcctct ggacttggtg 900
ttaattcaag tcaggcaaag gctcttgtat attatacatt tggagctctt 950
gggggcaatc taatagccca catggttttg gtaagtagac tttagtggaa 1000
ggctaataat attaacatca gaagaatttg tggtttatag cggccacaac 1050
tttttcagct ttcatgatcc agatttgctt gtattaagac caaatattca 1100
gttgaacttc cttcaaattc ttgttaatgg atataacaca tggaatctac 1150
atgtaaatga aagttggtgg agtcacaaat ttttctttaa aatgattagt 1200
ttggctgatt gcccctaaaa agagagatct gataaatggc tctttttaaa 1250
ttttctctga gttggaattg tcagaatcat tttttacatt agattatcat 1300
aattttaaaa atttttcttt agttttcaa aattttgtaa atggtggcta 1350
tagaaaaaca acatgaaata ttatacaata ttttgcaaca atgccctaag 1400
aattgttaaa attcatggag ttatttgtgc agaagactc cagagagctc 1450
tactttctgt tttttacttt tcatgattgg ctgtcttccc atttattctg 1500
gtcattttatt gctagtgaca ctgtgcctgc ttccagtagt ctcattttcc 1550
ctattttgct aatttggttac tttttctttg ctaatttgga agattaactc 1600
atttttaata aaattatgtc taagattaaa aaaaaaaaaa aaaaaaaaaa 1650
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
a 1701

<210> 115
<211> 301
<212> PRT
<213> Homo sapiens

<400> 115
Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Cys Ala Val Leu
1 5 10 15
Leu Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp
20 25 30

Glu	Ser	Leu	Asp	Ser	Lys	Thr	Thr	Leu	Thr	Ser	Asp	Glu	Ser	Val	35	40	45
Lys	Asp	His	Thr	Thr	Ala	Gly	Arg	Val	Val	Ala	Gly	Gln	Ile	Phe	50	55	60
Leu	Asp	Ser	Glu	Glu	Ser	Glu	Leu	Glu	Ser	Ser	Ile	Gln	Glu	Glu	65	70	75
Glu	Asp	Ser	Leu	Lys	Ser	Gln	Glu	Gly	Glu	Ser	Val	Thr	Glu	Asp	80	85	90
Ile	Ser	Phe	Leu	Glu	Ser	Pro	Asn	Pro	Glu	Asn	Lys	Asp	Tyr	Glu	95	100	105
Glu	Pro	Lys	Lys	Val	Arg	Lys	Pro	Ala	Leu	Thr	Ala	Ile	Glu	Gly	110	115	120
Thr	Ala	His	Gly	Glu	Pro	Cys	His	Phe	Pro	Phe	Leu	Phe	Leu	Asp	125	130	135
Lys	Glu	Tyr	Asp	Glu	Cys	Thr	Ser	Asp	Gly	Arg	Glu	Asp	Gly	Arg	140	145	150
Leu	Trp	Cys	Ala	Thr	Thr	Tyr	Asp	Tyr	Lys	Ala	Asp	Glu	Lys	Trp	155	160	165
Gly	Phe	Cys	Glu	Thr	Glu	Glu	Glu	Ala	Ala	Lys	Arg	Arg	Gln	Met	170	175	180
Gln	Glu	Ala	Glu	Met	Met	Tyr	Gln	Thr	Gly	Met	Lys	Ile	Leu	Asn	185	190	195
Gly	Ser	Asn	Lys	Lys	Ser	Gln	Lys	Arg	Glu	Ala	Tyr	Arg	Tyr	Leu	200	205	210
Gln	Lys	Ala	Ala	Ser	Met	Asn	His	Thr	Lys	Ala	Leu	Glu	Arg	Val	215	220	225
Ser	Tyr	Ala	Leu	Leu	Phe	Gly	Asp	Tyr	Leu	Pro	Gln	Asn	Ile	Gln	230	235	240
Ala	Ala	Arg	Glu	Met	Phe	Glu	Lys	Leu	Thr	Glu	Glu	Gly	Ser	Pro	245	250	255
Lys	Gly	Gln	Thr	Ala	Leu	Gly	Phe	Leu	Tyr	Ala	Ser	Gly	Leu	Gly	260	265	270
Val	Asn	Ser	Ser	Gln	Ala	Lys	Ala	Leu	Val	Tyr	Tyr	Thr	Phe	Gly	275	280	285
Ala	Leu	Gly	Gly	Asn	Leu	Ile	Ala	His	Met	Val	Leu	Val	Ser	Arg	290	295	300

Leu

<210> 116
 <211> 584
 <212> DNA
 <213> Homo sapiens
 <400> 116

cttcccagcc ctgtgcccc aagcacctgg agcatatagc cttgcagaac 50
 ttctacttgc ctgcctccct gcctctggcc atggcctgcc ggtgcctcag 100
 cttcctttctg atggggacct tctgtcagc ttcccagaca gtcctggccc 150
 agctggatgc actgctggtc ttcccaggcc aagtggctca actctcctgc 200
 acgctcagcc cccagcacgt caccatcagg gactacgggtg tgtcctggta 250
 ccagcagcgg gcaggcagtg cccctcgata tctcctctac taccgctcgg 300
 aggaggatca ccaccggcct gctgacatcc ccgatcgatt ctgcgcagcc 350
 aaggatgagg cccacaatgc ctgtgtcctc accattagtc ccgtgcagcc 400
 tgaagacgac gcggattact actgctctgt tggctacggc tttagtcctt 450
 aggggtgggg tgtgagatgg gtgcctcccc tctgcctccc attttotgccc 500
 ctgaccttgg gtccctttta aactttctct gagccttgc tcccctctgt 550
 aaaatgggtt aataatattc aacatgtcaa caac 584

<210> 117
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 117
 Met Ala Cys Arg Cys Leu Ser Phe Leu Leu Met Gly Thr Phe Leu
 1 5 10 15
 Ser Val Ser Gln Thr Val Leu Ala Gln Leu Asp Ala Leu Leu Val
 20 25 30
 Phe Pro Gly Gln Val Ala Gln Leu Ser Cys Thr Leu Ser Pro Gln
 35 40 45
 His Val Thr Ile Arg Asp Tyr Gly Val Ser Trp Tyr Gln Gln Arg
 50 55 60
 Ala Gly Ser Ala Pro Arg Tyr Leu Leu Tyr Tyr Arg Ser Glu Glu
 65 70 75
 Asp His His Arg Pro Ala Asp Ile Pro Asp Arg Phe Ser Ala Ala
 80 85 90
 Lys Asp Glu Ala His Asn Ala Cys Val Leu Thr Ile Ser Pro Val
 95 100 105
 Gln Pro Glu Asp Asp Ala Asp Tyr Tyr Cys Ser Val Gly Tyr Gly
 110 115 120
 Phe Ser Pro

<210> 118
 <211> 3402
 <212> DNA
 <213> Homo sapiens
 <400> 118

gcccgcgggc cccgagaccg ggcccggggg cgcggggcgg cgggatgcgg 50
cgcgcggggc ggcgatgacc ggcgagcgca cgcgcgggc cgggccctga 100
ccccgcggcc cgcgcgtga gcccccgcc gaggtccgga caggccgaga 150
tgacgccgag cccctgttg ctgctcctgc tgccgccgct gctgctgggg 200
gccttccac cggcgcggc cgcgcgaggc ccccaaaga tggcgacaa 250
ggtggtccca cggcaggtgg cccggtggg cgcactgtg cggctgcagt 300
gcccagtga gggggaccg cgcgcgtga ccatgtggac caaggatggc 350
cgcaccatcc acagcggctg gagccgcttc cgcgtgctgc cgcaggggct 400
gaaggtgaag cagggtggagc gggaggatgc cggcgtgtac gtgtgcaagg 450
ccaccaacgg cttcggcagc ctgagcgtca actacaccct cgtcgtgctg 500
gatgacatta gcccaggaa ggagagcctg gggcccgaca gctcctctgg 550
gggtcaagag gaccccgcca gccagcagt ggcacgaccg cgcttcacac 600
agccctccaa gatgaggcgc cgggtgatcg cacggcccggt ggtagctcc 650
gtgcggctca agtgcgtggc cagcgggcac cctcggcccg acatcacgtg 700
gatgaaggac gaccaggcct tgacgcgcc agaggccgct gagcccagga 750
agaagaagtg gacactgagc ctgaagaacc tgcggccgga ggacagcggc 800
aaatacacct gccgcgtgtc gaaccgcgcg ggcgcatca acgccaccta 850
caaggtggat gtgatccagc ggaccgcttc caagcccgtg ctcacaggca 900
cgcaccccgt gaacacgacg gtggacttcg gggggaccac gtccttcag 950
tgcaaggtgc gcagcgacgt gaagccggtg atccagtggc tgaagcgcgt 1000
ggagtacggc gccgagggc gccacaactc caccatcgat gtgggcggcc 1050
agaagtttgt ggtgctgccc acgggtgacg tgtggtcgcg gcccgacggc 1100
tcctacctca ataagctgct catcaccggt gcccgccagg acgatgcggg 1150
catgtacatc tgccttgcg ccaacaccat gggctacagc ttccgcagcg 1200
ccttcctcac cgtgctgcca gacccaaaac gcccagggcc acctgtggcc 1250
tcctcgtcct cggccactag cctgccgtgg ccggtggtca tcggcatccc 1300
agccggcgct gtcttcaccc tgggcaccct gctcctgtgg ctttgccagg 1350
cccagaagaa gccgtgcacc cccgcgcctg cccctcccct gcctgggcac 1400
cgcgcgcgg ggacggcccg cgaccgcagc ggagacaagg accttccttc 1450
gttgcccgcc ctacgcgtg gccctggtgt ggggctgtgt gaggagcatg 1500
ggtctccggc agccccccag cacttactgg gcccaggccc agttgctggc 1550
cctaagttgt accccaaact ctacacagac atccacacac acacacacac 1600

acactctcac acacactcac acgtggaggg caaggtccac cagcacatcc 1650
 actatcagtg ctagacggca ccgtatctgc agtgggcacg ggggggccg 1700
 ccagacaggc agactgggag gatggaggac ggagctgcag acgaaggcag 1750
 gggacccatg gcgaggagga atggccagca cccagggcag tctgtgtgtg 1800
 aggcatagcc cctggacaca cacacacaga cacacacact acctggatgc 1850
 atgtatgcac acacatgcgc gcacacgtgc tccctgaagg cacacgtacg 1900
 cacacgcaca tgcacagata tgccgcctgg gcacacagat aagctgcca 1950
 aatgcacgca cagcacaga gacatgccag aacatacaag gacatgctgc 2000
 ctgaacatac acacgcacac ccatgcgcag atgtgctgcc tggacacaca 2050
 cacacacacg gatatgctgt ctggacgcac acacgtgcag atatggtatc 2100
 cggacacaca cgtgcacaga tatgctgcct ggacacacag ataatgctgc 2150
 cttgacacac acatgcacgg atattgcctg gacacacaca cacacacacg 2200
 cgtgcacaga tatgctgtct ggacacgcac acacatgcag atatgctgcc 2250
 tggacacaca cttccagaca cacgtgcaca ggcgcagata tgctgcctgg 2300
 acacacgcag atatgctgtc tagtcacaca cacacgcaga catgctgtcc 2350
 ggacacacac acgcatgcac agatatgctg tccggacaca cacacgcacg 2400
 cagatatgct gcctggacac acacacagat aatgctgcct caacactcac 2450
 acacgtgcag atattgcctg gacacacaca tgtgcacaga tatgctgtct 2500
 ggacatgcac acacgtgcag atatgctgtc cggatacaca cgcacgcaca 2550
 catgcagata tgctgcctgg gcacacactt ccggacacac atgcacacac 2600
 aggtgcagat atgctgcctg gacacacaca cagataatgc tgctcaaca 2650
 ctacacacac tgcagatatt gcctggacac acacatgtgc acagatatgc 2700
 tgtctggaca tgcacacacg tgcagatatg ctgtccggat acacacgcac 2750
 gcacacatgc agatatgctg cctgggcaca cacttccgga cacacatgca 2800
 cacacaggtg cagatatgct gcctggacac acgcagactg acgtgctttt 2850
 gggaggggtg gccgtgaagc ctgcagtacg tgtgccgtga ggctcatagt 2900
 tgatgagggg ctttccctgc tccaccgtca ccccccaac tctgcccgcc 2950
 tctgtccccg cctcagtccc cgcctccatc cccgcctctg tcccctggcc 3000
 ttggcggcta tttttgccac ctgccttggg tgcccaggag tcccctactg 3050
 ctgtgggctg gggttggggg cacagcagcc ccaagcctga gaggctggag 3100
 cccatggcta gtggctcatc cccagtgcac tctccccctg acacagagaa 3150
 ggggccttgg tatttatatt taagaaatga agataatatt aataatgatg 3200

gaaggaagac tgggttcag ggactgtggt ctctcctggg gcccgggacc 3250
 cgcttgggtct ttcagccatg ctgatgacca caccctgtcc aggccagaca 3300
 ccacccccca cccactgtc gtggtggccc cagatctctg taattttatg 3350
 tagagtttga gotgaagccc cgtatatatta atttattttg ttaaacacaa 3400
 aa 3402

<210> 119
 <211> 504
 <212> PRT
 <213> Homo sapiens

<400> 119
 Met Thr Pro Ser Pro Leu Leu Leu Leu Leu Leu Pro Pro Leu Leu
 1 5 10 15
 Leu Gly Ala Phe Pro Pro Ala Ala Ala Ala Arg Gly Pro Pro Lys
 20 25 30
 Met Ala Asp Lys Val Val Pro Arg Gln Val Ala Arg Leu Gly Arg
 35 40 45
 Thr Val Arg Leu Gln Cys Pro Val Glu Gly Asp Pro Pro Pro Leu
 50 55 60
 Thr Met Trp Thr Lys Asp Gly Arg Thr Ile His Ser Gly Trp Ser
 65 70 75
 Arg Phe Arg Val Leu Pro Gln Gly Leu Lys Val Lys Gln Val Glu
 80 85 90
 Arg Glu Asp Ala Gly Val Tyr Val Cys Lys Ala Thr Asn Gly Phe
 95 100 105
 Gly Ser Leu Ser Val Asn Tyr Thr Leu Val Val Leu Asp Asp Ile
 110 115 120
 Ser Pro Gly Lys Glu Ser Leu Gly Pro Asp Ser Ser Ser Gly Gly
 125 130 135
 Gln Glu Asp Pro Ala Ser Gln Gln Trp Ala Arg Pro Arg Phe Thr
 140 145 150
 Gln Pro Ser Lys Met Arg Arg Arg Val Ile Ala Arg Pro Val Gly
 155 160 165
 Ser Ser Val Arg Leu Lys Cys Val Ala Ser Gly His Pro Arg Pro
 170 175 180
 Asp Ile Thr Trp Met Lys Asp Asp Gln Ala Leu Thr Arg Pro Glu
 185 190 195
 Ala Ala Glu Pro Arg Lys Lys Lys Trp Thr Leu Ser Leu Lys Asn
 200 205 210
 Leu Arg Pro Glu Asp Ser Gly Lys Tyr Thr Cys Arg Val Ser Asn
 215 220 225
 Arg Ala Gly Ala Ile Asn Ala Thr Tyr Lys Val Asp Val Ile Gln
 230 235 240

Arg	Thr	Arg	Ser	Lys	Pro	Val	Leu	Thr	Gly	Thr	His	Pro	Val	Asn	
				245					250					255	
Thr	Thr	Val	Asp	Phe	Gly	Gly	Thr	Thr	Ser	Phe	Gln	Cys	Lys	Val	
				260					265					270	
Arg	Ser	Asp	Val	Lys	Pro	Val	Ile	Gln	Trp	Leu	Lys	Arg	Val	Glu	
				275					280					285	
Tyr	Gly	Ala	Glu	Gly	Arg	His	Asn	Ser	Thr	Ile	Asp	Val	Gly	Gly	
				290					295					300	
Gln	Lys	Phe	Val	Val	Leu	Pro	Thr	Gly	Asp	Val	Trp	Ser	Arg	Pro	
				305					310					315	
Asp	Gly	Ser	Tyr	Leu	Asn	Lys	Leu	Leu	Ile	Thr	Arg	Ala	Arg	Gln	
				320					325					330	
Asp	Asp	Ala	Gly	Met	Tyr	Ile	Cys	Leu	Gly	Ala	Asn	Thr	Met	Gly	
				335					340					345	
Tyr	Ser	Phe	Arg	Ser	Ala	Phe	Leu	Thr	Val	Leu	Pro	Asp	Pro	Lys	
				350					355					360	
Pro	Pro	Gly	Pro	Pro	Val	Ala	Ser	Ser	Ser	Ser	Ala	Thr	Ser	Leu	
				365					370					375	
Pro	Trp	Pro	Val	Val	Ile	Gly	Ile	Pro	Ala	Gly	Ala	Val	Phe	Ile	
				380					385					390	
Leu	Gly	Thr	Leu	Leu	Leu	Trp	Leu	Cys	Gln	Ala	Gln	Lys	Lys	Pro	
				395					400					405	
Cys	Thr	Pro	Ala	Pro	Ala	Pro	Pro	Leu	Pro	Gly	His	Arg	Pro	Pro	
				410					415					420	
Gly	Thr	Ala	Arg	Asp	Arg	Ser	Gly	Asp	Lys	Asp	Leu	Pro	Ser	Leu	
				425					430					435	
Ala	Ala	Leu	Ser	Ala	Gly	Pro	Gly	Val	Gly	Leu	Cys	Glu	Glu	His	
				440					445					450	
Gly	Ser	Pro	Ala	Ala	Pro	Gln	His	Leu	Leu	Gly	Pro	Gly	Pro	Val	
				455					460					465	
Ala	Gly	Pro	Lys	Leu	Tyr	Pro	Lys	Leu	Tyr	Thr	Asp	Ile	His	Thr	
				470					475					480	
His	Thr	His	Thr	His	Ser	His	Thr	His	Ser	His	Val	Glu	Gly	Lys	
				485					490					495	
Val	His	Gln	His	Ile	His	Tyr	Gln	Cys							
				500											

<210> 120

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 120

cgagatgacg ccgagccccc 20

<210> 121

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 121

cggttcgaca cgcggcaggt g 21

<210> 122

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 122

tgctgctcct gctgccgccc ctgctgctgg gggccttccc gccgg 45

<210> 123

<211> 4420

<212> DNA

<213> Homo sapiens

<400> 123

cccagctgag gagccctgct caagacacgg tcaactggatc tgagaaactt 50

cccaggggac cgattccag agtcagtac tctgtgaagc acccacatct 100

acctcttgcc acgttccac gggcttgggg gaaagatggg ggggaccaag 150

gcctgggtgt tctccttctt ggtcctggaa gtcacatctg tgttggggag 200

acagacgatg ctacccagt cagtaagaag agtccagcct gggagaaga 250

acccagcat ctttgccaag cctgccgaca ccctggagag ccctgggtgag 300

tggacaacat ggttcaacat cgactacca ggcgggaagg ggcactatga 350

gcggttgac gccattcgt tctactatgg ggacogtga tgtgccgctc 400

ccctgcggt agaggctcg accactgact ggacacctgc gggcagcact 450

ggccaggtgg tccatgtag tccccgtgag ggtttctggt gcctcaacag 500

ggagcagcgg cctggccaga actgctctaa ttacaccgta cgcttcctct 550

gccaccagg atccctgcgc cgagacacag agcgcatctg gagcccatgg 600

tctccctgga gcaagtgtc agctgcctgt ggtcagactg gggccagac 650

tcgcacacgc atttgcttg cagagatggg gtcgctgtgc agtgaggcca 700

gcgaagagg tcagactgc atgggccagg actgtacagc ctgtgacctg 750

acctgccc aa tgggccaggt gaatgctgac tgtgatgcct gcatgtgcca 800

ggacttcatg cttcatgggg ctgtctccct tcccggaggt gcccagcct 850

caggggctgc tatctacctc ctgaccaaga cgccgaagct gctgacccag 900
acagacagtg atgggagatt ccgaatccct ggcttgtgcc ctgatggcaa 950
aagcatcctg aagatcacia aggtcaagtt tgccccatt gtactcacia 1000
tgccaagac tagcctgaag gcagccacca tcaaggcaga gtttgtgagg 1050
gcagagactc catacatggt gatgaaccct gagacaaaag cacggagagc 1100
tgggcagagc gtgtctctgt gctgtaaggc cacagggaag cccaggccag 1150
acaagtatth ttggtatcat aatgacacat tgctggatcc ttccctctac 1200
aagcatgaga gcaagctggt gctgaggaaa ctgcagcagc accaggctgg 1250
ggagtactth tgcaaggccc agagtgatgc tggggctgtg aagtccaagg 1300
ttgccagct gattgtcaca gcatctgatg agactccttg caaccagtt 1350
cctgagagct atcttatccg gctgccccat gattgctthc agaatgccac 1400
caactccttc tactatgacg tgggacgctg ccctgttaag acttgtgcag 1450
ggcagcagga taatgggatc aggtgccgtg atgctgtgca gaactgctgt 1500
ggcatctcca agacagagga aaggagatc cagtgcagtg gctacacgct 1550
accaccaag gtggccaagg agtgcagctg ccagcgggtg acggaaactc 1600
ggagcatcgt gcggggccgt gtcagtgtg ctgacaatgg ggagcccatg 1650
cgctttggcc atgtgtacat ggggaacagc cgtgtaagca tgactggcta 1700
caagggcact ttcacctcc atgtcccca ggacactgag aggtcgtgtg 1750
tcacatttgt ggacaggctg cagaagttt tcaacaccac caaagtgtgta 1800
cctttcaaca agaaggggag tgccgtgttc catgaaatca agatgcttgc 1850
tcggaaagag cccatcactt tggaagccat ggagaccaac atcatcccc 1900
tgggggaagt ggttgggtgaa gaccccatgg ctgaactgga gattccatcc 1950
aggagtttct acaggcagaa tggggagccc tacataggaa aagtgaaggc 2000
cagtgtgacc ttcttgatc cccggaatat ttccacagcc acagctgccc 2050
agactgacct gaacttcac aatgacgaag gagacactth ccccttgcg 2100
acgtatggca tgttctctgt ggacttcaga gatgaggta cctcagagcc 2150
acttaatgct ggcaaagtga aggtccacct tgactcgacc caggtaaga 2200
tgccagagca catatccaca gtgaaactct ggtcactcaa tccagacaca 2250
gggctgtggg aggaggaagg tgatttcaaa ttgaaaatc aaaggaggaa 2300
caaaagagaa gacagaacct tctgtgtgg caacctggag attcgtgaga 2350
ggaggctctt taacctggat gttcctgaaa gcaggcgggtg ctttgttaag 2400
gtgagggcct accggagtga gaggttcttg cctagtgagc agatccaggg 2450

ggttgtgata tccgtgatta acctggagcc tagaactggc ttcttgtcca 2500
 accctagggc ctggggccgc tttgacagtg tcatcacagg ccccaacggg 2550
 gcctgtgtgc ctgccttctg tgatgaccag tcccctgatg cctactctgc 2600
 ctatgtcttg gcaagcctgg ctggggagga actgcaagca gtggagtctt 2650
 ctctaaatt caacccaaat gcaattggcg tccctcagcc ctatctcaac 2700
 aagctcaact accgtcggac ggaccatgag gatccacggg ttaaaaagac 2750
 agctttccag attagcatgg ccaagccaag gcccaactca gctgaggaga 2800
 gcaatggggc catctatgcc tttgagaacc tccgggcatg tgaagaggca 2850
 ccaccagtg cagccactt ccggttctac cagattgagg gggatcgata 2900
 tgactacaac acagtccct tcaacgaaga tgaccctatg agctggactg 2950
 aagactatct ggcatggtgg ccaaagccga tggaaattcag ggctgtctat 3000
 atcaaggtga agattgtggg gccactggaa gtgaatgtgc gatcccgcaa 3050
 catggggggc actcatcgcc ggacagtggg gaagctgtat ggaatccgag 3100
 atgtgaggag cactcgggac agggaccagc ccaatgtctc agctgcctgt 3150
 ctggagttca agtgacgtgg gatgctctat gatcaggacc gtgtggaccg 3200
 caccctggtg aaggatcatc ccagggcag ctgccgtcga gccagtgtga 3250
 accccatgct gcatgagtac ctggtcaacc acttgccact tgcagtcaac 3300
 aacgacacca gtgagtacac catgctggca cccttggaac cactgggcca 3350
 caactatggc atctacactg tcaactgacca ggaccctcgc acggccaagg 3400
 agatcgcgct cggccggtgc tttgatggca catccgatgg ctctccaga 3450
 atcatgaaga gcaatgtggg agtagccctc accttcaact gtgtagagag 3500
 gcaagtaggc cgccagagtg ccttcagta cctccaaagc accccagccc 3550
 agtcccctgc tgcaggcact gtccaaggaa gagtgcctc gaggaggcag 3600
 cagcgagcga gcaggggtgg ccagcgccag ggtggagtgg tggcctctct 3650
 gagatttcct agagttgctc aacagcccct gatcaactaa gttttgtggt 3700
 acttcaccct cttctgccct catttcatgt gacagccatt gtgagactga 3750
 tgcacaaact gtcacttggg taatttaagc acttctgttt tcgtgaattt 3800
 gcttgtttgt ttcttcatgc ctttacttac tttgtcccat gctactgatt 3850
 ggcacgtggc ccccaaatg gcacaataaa gcccctttgt gaaactgttc 3900
 tttaatgaa acacaagaaa ttggccactg gtaaaactct gcagcttcaa 3950
 ctgtacttca tttaatgcca ttaatgcaaa tatacttcct cttctttttg 4000
 catggttttg ccacactctg caatagtgat aatctgatgc tgaagatcaa 4050

ataaccaata taaagcatat ttcttggcct tgctccacag gacataggca 4100
 agccttgatc atagttcata catataaatg gtggtgaaat aaagaaataa 4150
 aacacaatac ttttacttga aatgtaaata acttatttat ttcttttgcta 4200
 aatttggaat totagtgcac attcaaagtt aagctattaa atatagggtg 4250
 atcatagttc ctctaccaag tctggaaaga acatctcctg gtatccacaa 4300
 ttacaccagg ttgctaactg tatttgtaca tttccctttg cattcgcttt 4350
 tgttcttgct agaaaccag tgtagcccag ggcagatgic aataaatgca 4400
 tactctgtat ttcgaaaaaa 4420

<210> 124

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 124

Met	Val	Gly	Thr	Lys	Ala	Trp	Val	Phe	Ser	Phe	Leu	Val	Leu	Glu	1	5	10	15
Val	Thr	Ser	Val	Leu	Gly	Arg	Gln	Thr	Met	Leu	Thr	Gln	Ser	Val	20	25	30	
Arg	Arg	Val	Gln	Pro	Gly	Lys	Lys	Asn	Pro	Ser	Ile	Phe	Ala	Lys	35	40	45	
Pro	Ala	Asp	Thr	Leu	Glu	Ser	Pro	Gly	Glu	Trp	Thr	Thr	Trp	Phe	50	55	60	
Asn	Ile	Asp	Tyr	Pro	Gly	Gly	Lys	Gly	Asp	Tyr	Glu	Arg	Leu	Asp	65	70	75	
Ala	Ile	Arg	Phe	Tyr	Tyr	Gly	Asp	Arg	Val	Cys	Ala	Arg	Pro	Leu	80	85	90	
Arg	Leu	Glu	Ala	Arg	Thr	Thr	Asp	Trp	Thr	Pro	Ala	Gly	Ser	Thr	95	100	105	
Gly	Gln	Val	Val	His	Gly	Ser	Pro	Arg	Glu	Gly	Phe	Trp	Cys	Leu	110	115	120	
Asn	Arg	Glu	Gln	Arg	Pro	Gly	Gln	Asn	Cys	Ser	Asn	Tyr	Thr	Val	125	130	135	
Arg	Phe	Leu	Cys	Pro	Pro	Gly	Ser	Leu	Arg	Arg	Asp	Thr	Glu	Arg	140	145	150	
Ile	Trp	Ser	Pro	Trp	Ser	Pro	Trp	Ser	Lys	Cys	Ser	Ala	Ala	Cys	155	160	165	
Gly	Gln	Thr	Gly	Val	Gln	Thr	Arg	Thr	Arg	Ile	Cys	Leu	Ala	Glu	170	175	180	
Met	Val	Ser	Leu	Cys	Ser	Glu	Ala	Ser	Glu	Glu	Gly	Gln	His	Cys	185	190	195	
Met	Gly	Gln	Asp	Cys	Thr	Ala	Cys	Asp	Leu	Thr	Cys	Pro	Met	Gly	200	205	210	

Gln Val Asn Ala Asp Cys Asp Ala Cys Met Cys Gln Asp Phe Met	215	220	225
Leu His Gly Ala Val Ser Leu Pro Gly Gly Ala Pro Ala Ser Gly	230	235	240
Ala Ala Ile Tyr Leu Leu Thr Lys Thr Pro Lys Leu Leu Thr Gln	245	250	255
Thr Asp Ser Asp Gly Arg Phe Arg Ile Pro Gly Leu Cys Pro Asp	260	265	270
Gly Lys Ser Ile Leu Lys Ile Thr Lys Val Lys Phe Ala Pro Ile	275	280	285
Val Leu Thr Met Pro Lys Thr Ser Leu Lys Ala Ala Thr Ile Lys	290	295	300
Ala Glu Phe Val Arg Ala Glu Thr Pro Tyr Met Val Met Asn Pro	305	310	315
Glu Thr Lys Ala Arg Arg Ala Gly Gln Ser Val Ser Leu Cys Cys	320	325	330
Lys Ala Thr Gly Lys Pro Arg Pro Asp Lys Tyr Phe Trp Tyr His	335	340	345
Asn Asp Thr Leu Leu Asp Pro Ser Leu Tyr Lys His Glu Ser Lys	350	355	360
Leu Val Leu Arg Lys Leu Gln Gln His Gln Ala Gly Glu Tyr Phe	365	370	375
Cys Lys Ala Gln Ser Asp Ala Gly Ala Val Lys Ser Lys Val Ala	380	385	390
Gln Leu Ile Val Thr Ala Ser Asp Glu Thr Pro Cys Asn Pro Val	395	400	405
Pro Glu Ser Tyr Leu Ile Arg Leu Pro His Asp Cys Phe Gln Asn	410	415	420
Ala Thr Asn Ser Phe Tyr Tyr Asp Val Gly Arg Cys Pro Val Lys	425	430	435
Thr Cys Ala Gly Gln Gln Asp Asn Gly Ile Arg Cys Arg Asp Ala	440	445	450
Val Gln Asn Cys Cys Gly Ile Ser Lys Thr Glu Glu Arg Glu Ile	455	460	465
Gln Cys Ser Gly Tyr Thr Leu Pro Thr Lys Val Ala Lys Glu Cys	470	475	480
Ser Cys Gln Arg Cys Thr Glu Thr Arg Ser Ile Val Arg Gly Arg	485	490	495
Val Ser Ala Ala Asp Asn Gly Glu Pro Met Arg Phe Gly His Val	500	505	510
Tyr Met Gly Asn Ser Arg Val Ser Met Thr Gly Tyr Lys Gly Thr	515	520	525

Phe Thr Leu His Val	Pro Gln Asp Thr	Glu Arg Leu Val Leu Thr	530	535	540
Phe Val Asp Arg Leu	Gln Lys Phe Val	Asn Thr Thr Lys Val Leu	545	550	555
Pro Phe Asn Lys Lys	Gly Ser Ala Val	Phe His Glu Ile Lys Met	560	565	570
Leu Arg Arg Lys Glu	Pro Ile Thr Leu	Glu Ala Met Glu Thr Asn	575	580	585
Ile Ile Pro Leu Gly	Glu Val Val Gly	Glu Asp Pro Met Ala Glu	590	595	600
Leu Glu Ile Pro Ser	Arg Ser Phe Tyr	Arg Gln Asn Gly Glu Pro	605	610	615
Tyr Ile Gly Lys Val	Lys Ala Ser Val	Thr Phe Leu Asp Pro Arg	620	625	630
Asn Ile Ser Thr Ala	Thr Ala Ala Gln	Thr Asp Leu Asn Phe Ile	635	640	645
Asn Asp Glu Gly Asp	Thr Phe Pro Leu	Arg Thr Tyr Gly Met Phe	650	655	660
Ser Val Asp Phe Arg	Asp Glu Val Thr	Ser Glu Pro Leu Asn Ala	665	670	675
Gly Lys Val Lys Val	His Leu Asp Ser	Thr Gln Val Lys Met Pro	680	685	690
Glu His Ile Ser Thr	Val Lys Leu Trp	Ser Leu Asn Pro Asp Thr	695	700	705
Gly Leu Trp Glu Glu	Glu Gly Asp Phe	Lys Phe Glu Asn Gln Arg	710	715	720
Arg Asn Lys Arg Glu	Asp Arg Thr Phe	Leu Val Gly Asn Leu Glu	725	730	735
Ile Arg Glu Arg Arg	Leu Phe Asn Leu	Asp Val Pro Glu Ser Arg	740	745	750
Arg Cys Phe Val Lys	Val Arg Ala Tyr	Arg Ser Glu Arg Phe Leu	755	760	765
Pro Ser Glu Gln Ile	Gln Gly Val Val	Ile Ser Val Ile Asn Leu	770	775	780
Glu Pro Arg Thr Gly	Phe Leu Ser Asn	Pro Arg Ala Trp Gly Arg	785	790	795
Phe Asp Ser Val Ile	Thr Gly Pro Asn	Gly Ala Cys Val Pro Ala	800	805	810
Phe Cys Asp Asp Gln	Ser Pro Asp Ala	Tyr Ser Ala Tyr Val Leu	815	820	825
Ala Ser Leu Ala Gly	Glu Glu Leu Gln	Ala Val Glu Ser Ser Pro	830	835	840

Lys	Phe	Asn	Pro	Asn	Ala	Ile	Gly	Val	Pro	Gln	Pro	Tyr	Leu	Asn	
				845					850					855	
Lys	Leu	Asn	Tyr	Arg	Arg	Thr	Asp	His	Glu	Asp	Pro	Arg	Val	Lys	
				860					865					870	
Lys	Thr	Ala	Phe	Gln	Ile	Ser	Met	Ala	Lys	Pro	Arg	Pro	Asn	Ser	
				875					880					885	
Ala	Glu	Glu	Ser	Asn	Gly	Pro	Ile	Tyr	Ala	Phe	Glu	Asn	Leu	Arg	
				890					895					900	
Ala	Cys	Glu	Glu	Ala	Pro	Pro	Ser	Ala	Ala	His	Phe	Arg	Phe	Tyr	
				905					910					915	
Gln	Ile	Glu	Gly	Asp	Arg	Tyr	Asp	Tyr	Asn	Thr	Val	Pro	Phe	Asn	
				920					925					930	
Glu	Asp	Asp	Pro	Met	Ser	Trp	Thr	Glu	Asp	Tyr	Leu	Ala	Trp	Trp	
				935					940					945	
Pro	Lys	Pro	Met	Glu	Phe	Arg	Ala	Cys	Tyr	Ile	Lys	Val	Lys	Ile	
				950					955					960	
Val	Gly	Pro	Leu	Glu	Val	Asn	Val	Arg	Ser	Arg	Asn	Met	Gly	Gly	
				965					970					975	
Thr	His	Arg	Arg	Thr	Val	Gly	Lys	Leu	Tyr	Gly	Ile	Arg	Asp	Val	
				980					985					990	
Arg	Ser	Thr	Arg	Asp	Arg	Asp	Gln	Pro	Asn	Val	Ser	Ala	Ala	Cys	
				995					1000					1005	
Leu	Glu	Phe	Lys	Cys	Ser	Gly	Met	Leu	Tyr	Asp	Gln	Asp	Arg	Val	
				1010					1015					1020	
Asp	Arg	Thr	Leu	Val	Lys	Val	Ile	Pro	Gln	Gly	Ser	Cys	Arg	Arg	
				1025					1030					1035	
Ala	Ser	Val	Asn	Pro	Met	Leu	His	Glu	Tyr	Leu	Val	Asn	His	Leu	
				1040					1045					1050	
Pro	Leu	Ala	Val	Asn	Asn	Asp	Thr	Ser	Glu	Tyr	Thr	Met	Leu	Ala	
				1055					1060					1065	
Pro	Leu	Asp	Pro	Leu	Gly	His	Asn	Tyr	Gly	Ile	Tyr	Thr	Val	Thr	
				1070					1075					1080	
Asp	Gln	Asp	Pro	Arg	Thr	Ala	Lys	Glu	Ile	Ala	Leu	Gly	Arg	Cys	
				1085					1090					1095	
Phe	Asp	Gly	Thr	Ser	Asp	Gly	Ser	Ser	Arg	Ile	Met	Lys	Ser	Asn	
				1100					1105					1110	
Val	Gly	Val	Ala	Leu	Thr	Phe	Asn	Cys	Val	Glu	Arg	Gln	Val	Gly	
				1115					1120					1125	
Arg	Gln	Ser	Ala	Phe	Gln	Tyr	Leu	Gln	Ser	Thr	Pro	Ala	Gln	Ser	
				1130					1135					1140	
Pro	Ala	Ala	Gly	Thr	Val	Gln	Gly	Arg	Val	Pro	Ser	Arg	Arg	Gln	
				1145					1150					1155	

Gln Arg Ala Ser Arg Gly Gly Gln Arg Gln Gly Gly Val Val Ala
 1160 1165 1170

Ser Leu Arg Phe Pro Arg Val Ala Gln Gln Pro Leu Ile Asn
 1175 1180

<210> 125
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 125
 ctggtgcctc aacagggagc ag 22

<210> 126
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 126
 ccattgtgca ggtcaggtca cag 23

<210> 127
 <211> 40
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 127
 ctggagcaag tgctcagctg cctgtggtca gactggggtc 40

<210> 128
 <211> 2819
 <212> DNA
 <213> Homo sapiens

<400> 128
 ctgcaagttg ttaacgccta acacacaagt atgttaggct tccaccaaag 50
 tcctcaatat acctgaatac gcacaatata ttaactcttc atatttggtt 100
 ttgggatctg ctttgaggtc ccatcttcat ttaaaaaaaaa atacagagac 150
 ctacctaccc gtacgcatac atacatatgt gtatatatat gtaaactaga 200
 caaagatcgc agatcataaa gcaagctctg ctttagtttc caagaagatt 250
 acaaagaatt tagagatgta tttgtcaaga tccctgtcga ttcatgccct 300
 ttgggttacg gtgtcctcag tgatgcagcc ctaccctttg gtttggggac 350
 attatgattt gtgtaagact cagatttaca cggaagaagg gaaagtttgg 400
 gattacatgg cctgccagcc ggaatccacg gacatgacaa aatatctgaa 450

agtgaaactc gatcctccgg atattacctg tggagaccct cctgagacgt 500
 tctgtgcaat gggcaatccc tacatgtgca ataatgagtg tgatgagagt 550
 acccctgagc tggcacaccc ccctgagctg atgtttgatt ttgaaggaag 600
 acatccctcc acattttggc agtctgccac ttggaaggag tatcccaagc 650
 ctctccaggt taacatcact ctgtcttggg gcaaaacat tgagctaaca 700
 gacaacatag ttattacctt tgaatctggg cgtccagacc aaatgatcct 750
 ggagaagtct ctgattatg gacgaacatg gcagccctat cagtattatg 800
 ccacagactg cttagatgct ttccacatgg atcctaaatc cgtgaaggat 850
 ttatcacagc atacgggtctt agaaatcatt tgcacagaag agtactcaac 900
 aggggtataca acaaatagca aaataatcca ctttgaaatc aaagacaggt 950
 tcgcgctttt tgctggacct cgcctacgca atatggcttc cctctacgga 1000
 cagctggata caaccaagaa actcagagat ttctttacag tcacagacct 1050
 gaggataagg ctgttaagac cagccgttgg ggaaatatct gtagatgagc 1100
 tacacttggc acgctacttt tacgcgatct cagacataaa ggtgagagga 1150
 aggtgcaagt gtaatctcca tgccactgta tgtgtgtatg acaacagcaa 1200
 attgacatgc gaatgtgagc acaacactac aggtccagac tgtgggaaat 1250
 gcaagaagaa ttatcagggc cgaccttggg gtccaggctc ctatctcccc 1300
 atcccccagg gactgcaaa tacctgtatc ccagtatctt ccagtattgg 1350
 tacgaatgtc tgcgacaacg agctcctgca ctgccagaac ggagggagct 1400
 gccacaacaa cgtgcgctgc ctgtgcccgg ccgcatacac gggcatcctc 1450
 tgcgagaagc tgcggtgcga ggaggctggc agctgcggct ccgactctgg 1500
 ccagggcgcg ccccgccagc gcacccagc gctgctgctg ctgaccacgc 1550
 tgctgggaac cgccagcccc ctggtgttct aggtgtcacc tccagccaca 1600
 ccggacgggc ctgtgccgtg gggaagcaga cacaacccaa acatttgcta 1650
 ctaacatagg aaacacacac atacagacac cccactcag acagtgtaca 1700
 aactaagaag gcctaactga actaagccat atttatcacc cgtggacagc 1750
 acatccgagt caagactgtt aatttctgac tccagaggag ttggcagctg 1800
 ttgatattat cactgcaaat cacattgcca gctgcagagc atattgtgga 1850
 ttggaaaggc tgcgacagcc ccccaaacag gaaagacaaa aaacaaacaa 1900
 atcaaccgac ctaaaaacat tggctactct agcgtggtgc gccctagtag 1950
 gactccgccc agtgtgtgga ccaaccaa at agcattcttt gctgtcaggt 2000
 gcattgtggg cataaggaaa tctgttacia gctgccatat tggcctgctt 2050

ccgtccctga atcccttcca acctgtgctt tagtgaacgt tgctctgtaa 2100
 ccctcgttgg ttgaaagatt tctttgtctg atgttagtga tgcacatgtg 2150
 taacagcccc ctctaaaagc gcaagccagt catacccctg tatactcttag 2200
 cagcactgag tccagtgcga gcacacaccc actatacaag agtggctata 2250
 ggaaaaaaga aagtgtatct atccttttgt attcaaatga agttattttt 2300
 cttgaactac tgtaatatgt agattttttg tattattgcc aatttgtgtt 2350
 accagacaat ctgttaatgt atctaattcg aatcagcaaa gactgacatt 2400
 ttattttgtc ctctttcgtt ctgttttgtt tcaactgtgca gagatttctc 2450
 tgtaagggca acgaacgtgc tggcatcaaa gaatatcagt ttacatatat 2500
 aacaagtgtataaagattcc accaaaggac attctaaatg ttttcttgtt 2550
 gctttaacac tggaagattt aaagaataaa aactcctgca taaacgattt 2600
 caggaatttg tattgcaatt tcttaagatg aaaggaacag ccaccaagca 2650
 gtttcacact cactttactg atttctgtgt ggactgagta cattcagctg 2700
 acgaatttag ttcccaggaa gatggattga tgttcactag cttggacaac 2750
 ttctgcaaaa tatgagacta tttccacttg ggaaaaatta caacagcaaa 2800
 aaaaaaaaaa aaaaaaaaaa 2819

<210> 129

<211> 438

<212> PRT

<213> Homo sapiens

<400> 129

Met	Tyr	Leu	Ser	Arg	Ser	Leu	Ser	Ile	His	Ala	Leu	Trp	Val	Thr
1				5					10					15
Val	Ser	Ser	Val	Met	Gln	Pro	Tyr	Pro	Leu	Val	Trp	Gly	His	Tyr
				20					25					30
Asp	Leu	Cys	Lys	Thr	Gln	Ile	Tyr	Thr	Glu	Glu	Gly	Lys	Val	Trp
				35					40					45
Asp	Tyr	Met	Ala	Cys	Gln	Pro	Glu	Ser	Thr	Asp	Met	Thr	Lys	Tyr
				50					55					60
Leu	Lys	Val	Lys	Leu	Asp	Pro	Pro	Asp	Ile	Thr	Cys	Gly	Asp	Pro
				65					70					75
Pro	Glu	Thr	Phe	Cys	Ala	Met	Gly	Asn	Pro	Tyr	Met	Cys	Asn	Asn
				80					85					90
Glu	Cys	Asp	Ala	Ser	Thr	Pro	Glu	Leu	Ala	His	Pro	Pro	Glu	Leu
				95					100					105
Met	Phe	Asp	Phe	Glu	Gly	Arg	His	Pro	Ser	Thr	Phe	Trp	Gln	Ser
				110					115					120
Ala	Thr	Trp	Lys	Glu	Tyr	Pro	Lys	Pro	Leu	Gln	Val	Asn	Ile	Thr

<210> 130
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 130
tcgattatgg acgaacatgg cagc 24

<210> 131
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 131
ttctgagatc cctcatcctc 20

<210> 132
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 132
agggttcaggg acagcaagtt tggg 24

<210> 133
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 133
tttgctggac ctcggctacg gaattggctt cccctctacgg acagctggat 50

<210> 134
<211> 1493
<212> DNA
<213> Homo sapiens

<400> 134
cccacgcgtc cgggtgacct gggccgagcc ctcccggtcg gctaagattg 50
ctgaggaggc ggcgggtagc tggcaggcgc cgacttcoga aggcgcgcgt 100
ccgggcgagg tgtcctcatg acttctcttg tggaccatgt cagtgatctt 150
ttttgcctgc gtggtacggg taagggatgg actgcccctc tcagcctcta 200
ctgattttta ccacacccaa gatttttttg aatggaggag acgggtcaag 250
agtttagcct tgcgactggc ccagtatcca ggtcgagggt ctgcagaagg 300

ttgtgacttt agtatacatt ttctttcttt cggggacgtg gcctgcatgg 350
 ctatctgctc ctgccagtgt ccagcagcca tggccttctg ctctctggag 400
 accctgtggt gggaattcac agcttcctat gacactacct gcattggcct 450
 agcctccagg ccatacgctt ttcttgagtt tgacagcatc attcagaaaag 500
 tgaagtggca ttttaactat gtaagttcct ctcatatgga gtgcagcttg 550
 gaaaaaattc aggaggagct caagttgcag cctccagcgg ttctcactct 600
 ggaggacaca gatgtggcaa atgggggtgat gaatggtcac acaccgatgc 650
 acttgagacc tgctcctaatt ttccgaatgg aaccagtgcac agccctgggt 700
 atcctctccc tcattctcaa catcatgtgt gctgccctga atctcattcg 750
 aggagttcac cttgcagaac attctttaca ggatccaagg agctggttct 800
 gctggttggc ccaaacctcg tgagccagcc acccctgacc caaatgagga 850
 gagctctgat tctcccatcc gggagcagtg atgtcaaact tctgctgctg 900
 gggaaatctc atcagcaggg agcctgtgga aaagggcatg tcagtgaat 950
 ctgggaatgg ctggattcgg aaacatctgc ccatgtgtat tgatggcaga 1000
 gctgttgccc acaagcgcct tttatttagg gtaaaattaa caaatccatt 1050
 ctattcctct gacccatgct tagtacatat gacctttaac ccttacattt 1100
 atatgattct ggggttgctt cagaagtgtt atttcatgaa tcattcatat 1150
 gatttgatcc ccaggattc tattttgttt aatgggcttt tctactaaaa 1200
 gcataaaata ctgaggctga tttagtcagg gcaaaacat ttactttaca 1250
 tattcgtttt caatacttgc tgttcatgtt acacaagctt cttacggttt 1300
 tcttgtaaca ataaatattt tgagtaaata atgggtacat tttacaaaac 1350
 tcagtagtac aacctaaact tgtataaaaag tgtgtaaaaa tgtatagcca 1400
 tttatatacct atgtataaat taaatgaggt ggcttcagaa atggcagaat 1450
 aaatctaaag tgtttattaa aaaaaaaaaa aaaaaaaaaa aag 1493

<210> 135

<211> 228

<212> PRT

<213> Homo sapiens

<400> 135

Met	Ser	Val	Ile	Phe	Phe	Ala	Cys	Val	Val	Arg	Val	Arg	Asp	Gly
1				5					10					15

Leu	Pro	Leu	Ser	Ala	Ser	Thr	Asp	Phe	Tyr	His	Thr	Gln	Asp	Phe
				20				25						30

Leu	Glu	Trp	Arg	Arg	Arg	Leu	Lys	Ser	Leu	Ala	Leu	Arg	Leu	Ala
				35				40						45

Gln	Tyr	Pro	Gly	Arg	Gly	Ser	Ala	Glu	Gly	Cys	Asp	Phe	Ser	Ile	
				50					55					60	
His	Phe	Ser	Ser	Phe	Gly	Asp	Val	Ala	Cys	Met	Ala	Ile	Cys	Ser	
				65					70					75	
Cys	Gln	Cys	Pro	Ala	Ala	Met	Ala	Phe	Cys	Phe	Leu	Glu	Thr	Leu	
				80					85					90	
Trp	Trp	Glu	Phe	Thr	Ala	Ser	Tyr	Asp	Thr	Thr	Cys	Ile	Gly	Leu	
				95					100					105	
Ala	Ser	Arg	Pro	Tyr	Ala	Phe	Leu	Glu	Phe	Asp	Ser	Ile	Ile	Gln	
				110					115					120	
Lys	Val	Lys	Trp	His	Phe	Asn	Tyr	Val	Ser	Ser	Ser	Gln	Met	Glu	
				125					130					135	
Cys	Ser	Leu	Glu	Lys	Ile	Gln	Glu	Glu	Leu	Lys	Leu	Gln	Pro	Pro	
				140					145					150	
Ala	Val	Leu	Thr	Leu	Glu	Asp	Thr	Asp	Val	Ala	Asn	Gly	Val	Met	
				155					160					165	
Asn	Gly	His	Thr	Pro	Met	His	Leu	Glu	Pro	Ala	Pro	Asn	Phe	Arg	
				170					175					180	
Met	Glu	Pro	Val	Thr	Ala	Leu	Gly	Ile	Leu	Ser	Leu	Ile	Leu	Asn	
				185					190					195	
Ile	Met	Cys	Ala	Ala	Leu	Asn	Leu	Ile	Arg	Gly	Val	His	Leu	Ala	
				200					205					210	
Glu	His	Ser	Leu	Gln	Asp	Pro	Arg	Ser	Trp	Phe	Cys	Trp	Leu	Asp	
				215					220					225	

Gln Thr Ser

<210> 136
 <211> 239
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 39, 61, 143, 209
 <223> unknown base

<400> 136
 tgcttcctgg agaccctgtg gtgggaattc acagcttcnt atgacactac 50
 ctgcattggc ntagcctcca ggccatacgc ttttcttgag tttgacagca 100
 tcattcagaa agtgaagtgg cattttaact atgtaagttc ctntcagatg 150
 gagtgcagct tggaaaaaat tcaggaggag ctcaagttgc agcctccagc 200
 ggttctcant atggaggaca cagatgtggc aaatggggt 239

<210> 137
 <211> 2300
 <212> DNA

<213> Homo sapiens

<400> 137

ctcagcggcg cttcctcgta gcgagcctag tggcgggtgt ttgcattgaa 50
acgtgagcgc gacccgacct taaagagtgg ggagcaaagg gaggacagag 100
ccctttaaaa cgaggcgggt ggtgcctgcc cctttaaggg cggggcgtcc 150
ggacgactgt atctgagccc cagactgccc cgagtttctg tcgcaggctg 200
cgaggaaagg cccctaggct gggctctgggt gcttggcggc ggcggcttcc 250
tccccgctcg tcttccccgg gccagaggc acctcggtt cagtcagtgt 300
gagcagagta tggaagcacc tgactacgaa gtgctatccg tgcgagaaca 350
gctattccac gagaggatcc gcgagtgtat tatatcaaca cttctgtttg 400
caacactgta catcctctgc cacatcttcc tgaccgctt caagaagcct 450
gctgagttca ccacagtgga tgatgaagat gccaccgtca acaagattgc 500
gctcgagctg tgcaccttta ccttggcaat tgccctgggt gctgtcctgc 550
tcttgccctt ctccatcatc agcaatgagg tgctgctctc cctgcctcgg 600
aactactaca tccagtggct caacggctcc ctcatccatg gcctctggaa 650
ccttggtttt ctcttcccca acctgtccct catcttctc atgccccttg 700
catatttctt cactgagtct gagggtttg ctggctccag aaagggtgtc 750
ctgggcccgg tctatgagac agtgggtgat ttgatgctcc tcaactctgt 800
gggtgctagg atgggtgtgg tggcatcagc cattgtggac aagaacaagg 850
ccaacagaga gtcactctat gacttttggg agtactatct cccctacctc 900
tactcatgca tctccttctt tggggttctg ctgctcctgg tgtgtactcc 950
actgggtctc gcccgcatgt tctccgtcac tgggaagctg ctagtcaagc 1000
cccggctgct ggaagacctg gaggagcagc tgtactgctc agcctttgag 1050
gaggcagccc tgaccgcgag gatctgtaat cctacttctt gctggctgcc 1100
tttagacatg gagctgctac acagacaggt cctggctctg cagacacaga 1150
gggtcctgct ggagaagagg cggaaggctt cagcctggca acggaacctg 1200
ggctaccccc tggctatgct gtgcttgctg gtgctgacgg gcctgtctgt 1250
gctcattgtg gccatccaca tctggagct gctcatcgat gaggctgcca 1300
tgccccgagg catgcagggt acctccttag gccaggctc cttctccaag 1350
ctgggctcct ttgtgcccgt cattcagggt gtactcatct ttacctaata 1400
gggtgcctca gttgtgggct tctatagctc tccactcttc cggagcctgc 1450
ggcccagatg gcacgacact gccatgacgc agataattgg gaactgtgtc 1500

tgtctcctgg tcctaagctc agcacttcct gtcttctctc gaaccctggg 1550
 gctcactcgc tttgacctgc tgggtgactt tggacgcttc aactggctgg 1600
 gcaatttcta cattgtgttc ctctacaacg cagcctttgc aggcctcacc 1650
 acactctgtc tgggtgaagac cttcactgca gctgtgcggg cagagctgat 1700
 ccgggccttt gggctggaca gactgccgct gcccgtctcc gggttccccc 1750
 aggcattctag gaagaccag caccagtgc ctccagctgg gggtaggaag 1800
 gaaaaaactg gacactgcc tctgtgcct aggcctggag ggaagccaa 1850
 ggctacttgg acctcaggac ctggaatctg agagggtggg tggcagaggg 1900
 gagcagagcc atctgcaata ttgcataatc tgagccagag tttgggacca 1950
 ggacctcctg cttttccata cttaactgtg gcctcagcat ggggtagggc 2000
 tgggtgactg ggtctagccc ctgatccaa atctgtttac acatcaatct 2050
 gcctcactgc tgttctgggc catccccata gccatgttta catgatttga 2100
 tgtgcaatag ggtggggtag gggcagggaa aggactgggc cagggcaggc 2150
 tcgggagata gattgtctcc ctgacctctg gccagcaga gcctaagcac 2200
 tgtgctatcc tggaggggct ttggaccacc tgaaagacca aggggatagg 2250
 gaggaggagg cttcagccat cagcaataaa gttgatcca gggaaaaaaa 2300

<210> 138

<211> 489

<212> PRT

<213> Homo sapiens

<400> 138

Met	Glu	Ala	Pro	Asp	Tyr	Glu	Val	Leu	Ser	Val	Arg	Glu	Gln	Leu
1				5					10					15
Phe	His	Glu	Arg	Ile	Arg	Glu	Cys	Ile	Ile	Ser	Thr	Leu	Leu	Phe
				20					25					30
Ala	Thr	Leu	Tyr	Ile	Leu	Cys	His	Ile	Phe	Leu	Thr	Arg	Phe	Lys
				35					40					45
Lys	Pro	Ala	Glu	Phe	Thr	Thr	Val	Asp	Asp	Glu	Asp	Ala	Thr	Val
				50					55					60
Asn	Lys	Ile	Ala	Leu	Glu	Leu	Cys	Thr	Phe	Thr	Leu	Ala	Ile	Ala
				65					70					75
Leu	Gly	Ala	Val	Leu	Leu	Leu	Pro	Phe	Ser	Ile	Ile	Ser	Asn	Glu
				80					85					90
Val	Leu	Leu	Ser	Leu	Pro	Arg	Asn	Tyr	Tyr	Ile	Gln	Trp	Leu	Asn
				95					100					105
Gly	Ser	Leu	Ile	His	Gly	Leu	Trp	Asn	Leu	Val	Phe	Leu	Phe	Pro
				110					115					120
Asn	Leu	Ser	Leu	Ile	Phe	Leu	Met	Pro	Phe	Ala	Tyr	Phe	Phe	Thr

440	445	450
Leu Val Lys Thr Phe Thr Ala Ala Val	Arg Ala Glu Leu Ile Arg	
455	460	465
Ala Phe Gly Leu Asp Arg Leu Pro Leu	Pro Val Ser Gly Phe Pro	
470	475	480
Gln Ala Ser Arg Lys Thr Gln His Gln		
485		

<210> 139
 <211> 294
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 53, 57
 <223> unknown base

<400> 139
 ggctgccgag ggaaggcccc ttgggttggt cttggttget tggcggcggc 50
 ggnttcntcc ccgctcgtcc tccccgggcc cagaggcacc tcggcttcag 100
 tcatgctgag cagagtatgg aagcacctga ctacgaagtg ctatccgtgc 150
 gagaacagct attccacgag aggatccgcg agtgtattat atcaaacatt 200
 ctgtttgcaa cactgtacat cctctgccac atcttctga cccgcttcaa 250
 gaagcctgct gagttcacca cagtggatga tgaagatgcc accg 294

<210> 140
 <211> 526
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 197, 349
 <223> unknown base

<400> 140
 gaccgacctt aaagagtggg agcaaaggga ggacagagcc ttttaaaacg 50
 aggcgggtggt gcctgccctt taaggcgagg gcgtccggac gactgtatct 100
 gagccccaga ctgccccgag tttctgtcgc aggctgcgag gaaaggcccc 150
 taggctgggt ctgggtgctt gcggcgggcg cttcctcccc gttgtontcc 200
 ccgggcccag aggcacctcg gcttcagtca tgctgagcag agtatggaag 250
 cacctgacta cgaagtgcta tccgtgcgag aacagctatt ccacgagagg 300
 atccgcgagt gtattatatc aacactttctg tttgcaacac tgtacatcnt 350
 ctgccacatc ttcctgacct gcttcaagaa gcctgctgag ttcaccacag 400
 tggatgatga agatgccacc gtcaacaaga ttgcgctcga gctgtgcacc 450

tttaccctgg caattgccct ggggtgctgc ctgctcctgc ctttctccat 500

catcagcaat gaggtgctgc actccc 526

<210> 141

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 141

gactgtatct gagccccaga ctgc 24

<210> 142

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 142

tcagcaatga ggtgctgctc 20

<210> 143

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 143

tgaggaagat gagggacagg ttgg 24

<210> 144

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 144

tatggaagca cctgactacg aagtgctatc cgtgcgagaa cagctattcc 50

<210> 145

<211> 685

<212> DNA

<213> Homo sapiens

<400> 145

gatgtgctcc ttggagctgg tgtgcagtgt cctgactgta agatcaagtc 50

caaacctgtt ttggaattga ggaaacttct cttttgatct cagcccttgg 100

tggtccaggt cttcatgctg ctgtgggtga tattactggt cctggctcct 150

gtcagtggac agtttgcaag gacaccacagg cccattatct tcctccagcc 200

tccatggacc acagtcttcc aaggagagag agtgaccctc acttgcaagg 250

gatttcgctt ctactcacca cagaaaacaa aatggtacca tcggtacctt 300
 gggaaagaaa tactaagaga aaccccagac aatatccttg aggttcagga 350
 atctggagag tacagatgcc aggccaggg ctcccctctc agtagccctg 400
 tgcacttggga tttttcttca gagatgggat ttcctcatgc tgcccaggct 450
 aatgttgaac tcctgggctc aagtgatctg ctcacctagg cctctcaaag 500
 cgctgggatt acagcttcgc tgatcctgca agctccactt tctgtgtttg 550
 aaggagactc tgtggttctg aggtgccggg caaaggcgga agtaacactg 600
 aataatacta tttacaagaa tgataatgtc ctggcattcc ttaataaaag 650
 aactgacttc caaaaaaaaa aaaaaaaaaa aaaaa 685

<210> 146

<211> 124

<212> PRT

<213> Homo sapiens

<400> 146

Met	Leu	Leu	Trp	Val	Ile	Leu	Leu	Val	Leu	Ala	Pro	Val	Ser	Gly
1				5					10					15
Gln	Phe	Ala	Arg	Thr	Pro	Arg	Pro	Ile	Ile	Phe	Leu	Gln	Pro	Pro
				20					25					30
Trp	Thr	Thr	Val	Phe	Gln	Gly	Glu	Arg	Val	Thr	Leu	Thr	Cys	Lys
				35					40					45
Gly	Phe	Arg	Phe	Tyr	Ser	Pro	Gln	Lys	Thr	Lys	Trp	Tyr	His	Arg
				50					55					60
Tyr	Leu	Gly	Lys	Glu	Ile	Leu	Arg	Glu	Thr	Pro	Asp	Asn	Ile	Leu
				65					70					75
Glu	Val	Gln	Glu	Ser	Gly	Glu	Tyr	Arg	Cys	Gln	Ala	Gln	Gly	Ser
				80					85					90
Pro	Leu	Ser	Ser	Pro	Val	His	Leu	Asp	Phe	Ser	Ser	Glu	Met	Gly
				95					100					105
Phe	Pro	His	Ala	Ala	Gln	Ala	Asn	Val	Glu	Leu	Leu	Gly	Ser	Ser
				110					115					120

Asp Leu Leu Thr

<210> 147

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 147

cagaagaggg ggctagctag ctgtctctgc ggaccaggga gacccccgcg 50
 ccccccggt gtgaggcggc ctcacagggc cgggtgggct ggcgagccga 100
 cgcggcggcg gaggaggctg tgaggagtgt gtggaacagg acccgggaca 150

gaggaaccat ggctccgcag aacctgagca ccttttgct gttgctgcta 200
tacctcatcg gggcggtgat tgccggacga gatttctata agatcttggg 250
ggtgcctcga agtgcctcta taaaggatat taaaaaggcc tataggaaac 300
tagccctgca gcttcatccc gaccggaacc ctgatgatcc acaagcccag 350
gagaaattcc aggatctggg tgctgcttat gaggttctgt cagatagtga 400
gaaacggaaa cagtacgata cttatggtga agaaggatta aaagatggtc 450
atcagagctc ccatggagac attttttcac acttctttgg ggattttggg 500
ttcatgtttg gaggaacccc tcgtcagcaa gacagaaata ttccaagagg 550
aagtgatatt attgtagatc tagaagtcac tttggaagaa gtatatgcag 600
gaaattttgt ggaagtagtt agaaacaaac ctgtggcaag gcaggctcct 650
ggcaaacgga agtgcaattg tcggcaagag atgcggacca cccagctggg 700
ccctggggcg ttccaaatga cccaggagggt ggtctgcgac gaatgcccta 750
atgtcaaact agtgaatgaa gaacgaacgc tggaagtaga aatagagcct 800
ggggtgagag acggcatgga gtaccccttt attggagaag gtgagcctca 850
cgtggatggg gagcctggag atttacggtt ccgaatcaaa gttgtcaagc 900
acccaatatt tgaaaggaga ggagatgatt tgtacacaaa tgtgacaatc 950
tcattagtig agtcactggt tggctttgag atggatatta ctacttgga 1000
tggtcacaag gtacatattt cccgggataa gatcaccagg ccaggagcga 1050
agctatggaa gaaaggggaa gggctcccca actttgacaa caacaatatc 1100
aagggctctt tgataatcac ttttgatgtg gattttccaa aagaacagtt 1150
aacagaggaa gcgagagaag gtatcaaaca gctactgaaa caagggtcag 1200
tgcagaaggt atacaatgga ctgcaaggat attgagagtg aataaaattg 1250
gaactttgttt aaaataagtg aataagcgat atttattatc tgcaaggttt 1300
ttttgtgtgt gtttttgttt ttattttcaa tatgcaagtt aggcttaatt 1350
tttttatcta atgatcatca tgaaatgaat aagagggctt aagaatttgt 1400
ccattttgat tcggaaaaga atgaccagca aaagggttac taatacctct 1450
ccctttgggg atttaatgtc tgggtgctgcc gcctgagttt caagaattaa 1500
agctgcaaga ggactccagg agcaaaagaa acacaatata gagggttgga 1550
gttggttagca atttcattca aaatgccaac tggagaagtc tgttttttaa 1600
tacattttgt tgttattttt a 1621

<210> 148
<211> 358
<212> PRT

<213> Homo sapiens

<400> 148

Met	Ala	Pro	Gln	Asn	Leu	Ser	Thr	Phe	Cys	Leu	Leu	Leu	Leu	Tyr
1				5					10					15
Leu	Ile	Gly	Ala	Val	Ile	Ala	Gly	Arg	Asp	Phe	Tyr	Lys	Ile	Leu
				20					25					30
Gly	Val	Pro	Arg	Ser	Ala	Ser	Ile	Lys	Asp	Ile	Lys	Lys	Ala	Tyr
				35					40					45
Arg	Lys	Leu	Ala	Leu	Gln	Leu	His	Pro	Asp	Arg	Asn	Pro	Asp	Asp
				50					55					60
Pro	Gln	Ala	Gln	Glu	Lys	Phe	Gln	Asp	Leu	Gly	Ala	Ala	Tyr	Glu
				65					70					75
Val	Leu	Ser	Asp	Ser	Glu	Lys	Arg	Lys	Gln	Tyr	Asp	Thr	Tyr	Gly
				80					85					90
Glu	Glu	Gly	Leu	Lys	Asp	Gly	His	Gln	Ser	Ser	His	Gly	Asp	Ile
				95					100					105
Phe	Ser	His	Phe	Phe	Gly	Asp	Phe	Gly	Phe	Met	Phe	Gly	Gly	Thr
				110					115					120
Pro	Arg	Gln	Gln	Asp	Arg	Asn	Ile	Pro	Arg	Gly	Ser	Asp	Ile	Ile
				125					130					135
Val	Asp	Leu	Glu	Val	Thr	Leu	Glu	Glu	Val	Tyr	Ala	Gly	Asn	Phe
				140					145					150
Val	Glu	Val	Val	Arg	Asn	Lys	Pro	Val	Ala	Arg	Gln	Ala	Pro	Gly
				155					160					165
Lys	Arg	Lys	Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu
				170					175					180
Gly	Pro	Gly	Arg	Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu
				185					190					195
Cys	Pro	Asn	Val	Lys	Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val
				200					205					210
Glu	Ile	Glu	Pro	Gly	Val	Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile
				215					220					225
Gly	Glu	Gly	Glu	Pro	His	Val	Asp	Gly	Glu	Pro	Gly	Asp	Leu	Arg
				230					235					240
Phe	Arg	Ile	Lys	Val	Val	Lys	His	Pro	Ile	Phe	Glu	Arg	Arg	Gly
				245					250					255
Asp	Asp	Leu	Tyr	Thr	Asn	Val	Thr	Ile	Ser	Leu	Val	Glu	Ser	Leu
				260					265					270
Val	Gly	Phe	Glu	Met	Asp	Ile	Thr	His	Leu	Asp	Gly	His	Lys	Val
				275					280					285
His	Ile	Ser	Arg	Asp	Lys	Ile	Thr	Arg	Pro	Gly	Ala	Lys	Leu	Trp
				290					295					300

Lys Lys Gly Glu Gly Leu Pro Asn Phe Asp Asn Asn Asn Ile Lys
305 310 315

Gly Ser Leu Ile Ile Thr Phe Asp Val Asp Phe Pro Lys Glu Gln
320 325 330

Leu Thr Glu Glu Ala Arg Glu Gly Ile Lys Gln Leu Leu Lys Gln
335 340 345

Gly Ser Val Gln Lys Val Tyr Asn Gly Leu Gln Gly Tyr
350 355

<210> 149

<211> 509

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 34, 52, 134, 142, 155, 158, 196, 217, 228, 272, 347, 410, 445, 482

<223> unknown base

<400> 149

tgggaccagg gaaccccggtg ccccccgggtg gagngcctaa caggccggtg 50

gntgcgaccg aagcggcggtg cggaggaggt tttgaggatt tttggaacag 100

gacccggaca gaggaaccat ggttccgcag aacntgagca cnttttgcct 150

gttgntgnta tacttcatcg gggcggtgat tgccggacga gatttntata 200

agattttggg gtgcctngaa gtgcctnta taaaggatat taaaaaggcc 250

tataggaaac tagccctgca gntttatccc gaccggaacc ctgatgatcc 300

acaagcccag gagaaattcc aggatttggg tgctgcttat gaggttntgt 350

cagatagtga gaaacggaaa cagtacgata attatggtga agaaggatta 400

aaagatggtn atcagagctc ccattggagac attttttcac acttntttgg 450

ggattttggt ttcatgtttg gaggaacccc tngtcagcaa gacagaaata 500

ttccaagag 509

<210> 150

<211> 1532

<212> DNA

<213> Homo sapiens

<400> 150

ggcacgaggc ggcggggcag tcgcgggatg cgcccgggag ccacagcctg 50

aggccctcag gtctctgcag gtgtcgtgga ggaacctagc acctgccatc 100

ctcttcccca atttgccact tccagcagct ttagcccatg aggaggatgt 150

gaccgggact gagtcaggag ccctctggaa gcatggagac tgtggtgatt 200

gttgccatag gtgtgctggc caccatcttt ctggcttcgt ttgcagcctt 250

ggtgctgggt tgcaaggcag gctactgccc gccgcgagac ctgctgcagc 300

gctatgattc taagcccatt gtggacctca ttggtgccat ggagaccag 350
tctgagccct ctgagttaga actggacgat gtcgttatca ccaaccccc 400
cattgaggcc attctggaga atgaagactg gatcgaagat gcctogggtc 450
tcatgtccca ctgcattgcc atcttgaaga ttgtcacac tctgacagag 500
aagcttggtg ccatgacaat gggctctggg gccaagatga agacttcagc 550
cagtgtcagc gacatcattg tgggtggcaa gcggatcagc cccagggtgg 600
atgatgttgt gaagtcgatg taccctccgt tggaccccaa actcctggac 650
gcacggacga ctgccctgct cctgtctgtc agtcacctgg tgctgggtgac 700
aaggaatgcc tgccatctga cgggaggcct ggactggatt gaccagtctc 750
tgtcggctgc tgaggagcat ttggaagtcc ttcgagaagc agccctagct 800
tctgagccag ataaaggcct cccaggccct gaaggcttcc tgcaggagca 850
gtctgcaatt tagtgacctac aggccagcag ctagccatga aggccctgc 900
cgccatccct ggatggctca gcttagcctt ctactttttc ctatagagtt 950
agttgtttct caccgctgga gagttcagct gtgtgtgcat agtaaagcag 1000
gagatccccg tcagtttatg cctcttttgc agttgcaaac tgtggctggt 1050
gagtggcagt ctaatactac agttagggga gatgccattc actctctgca 1100
agaggagtat tgaaaactgg tggactgtca gctttattta gctcacctag 1150
tgttttcaag aaaattgagc caccgtctaa gaaatcaaga ggtttcacat 1200
taaaattaga atttctggcc tctctcgatc ggtcagaatg tgtggcaatt 1250
ctgatctgca ttttcagaag aggacaatca attgaaacta agtaggggtt 1300
tcttcttttg gcaagacttg tactctctca cctggcctgt ttcatttatt 1350
tgtattatct gcctgggtccc tgaggcgtct gggctctctcc tctcccttgc 1400
aggtttggtt ttgaagctga ggaactacaa agttgatgat ttctttttta 1450
tctttatgcc tgcaatttta cctagctacc actaggtgga tagtaaattt 1500
atacttatgt ttccctcaaa aaaaaaaaaa aa 1532

<210> 151

<211> 226

<212> PRT

<213> Homo sapiens

<400> 151

Met	Glu	Thr	Val	Val	Ile	Val	Ala	Ile	Gly	Val	Leu	Ala	Thr	Ile
1				5					10					15

Phe	Leu	Ala	Ser	Phe	Ala	Ala	Leu	Val	Leu	Val	Cys	Arg	Gln	Arg
				20					25					30

Tyr	Cys	Arg	Pro	Arg	Asp	Leu	Leu	Gln	Arg	Tyr	Asp	Ser	Lys	Pro
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35	40	45
Ile Val Asp Leu	Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser		
	50	55	60
Glu Leu Glu Leu Asp Asp Val Val Ile Thr Asn Pro His Ile Glu			
	65	70	75
Ala Ile Leu Glu Asn Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu			
	80	85	90
Met Ser His Cys Ile Ala Ile Leu Lys Ile Cys His Thr Leu Thr			
	95	100	105
Glu Lys Leu Val Ala Met Thr Met Gly Ser Gly Ala Lys Met Lys			
	110	115	120
Thr Ser Ala Ser Val Ser Asp Ile Ile Val Val Ala Lys Arg Ile			
	125	130	135
Ser Pro Arg Val Asp Asp Val Val Lys Ser Met Tyr Pro Pro Leu			
	140	145	150
Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr Ala Leu Leu Leu Ser			
	155	160	165
Val Ser His Leu Val Leu Val Thr Arg Asn Ala Cys His Leu Thr			
	170	175	180
Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala Ala Glu Glu			
	185	190	195
His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu Pro Asp			
	200	205	210
Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser Ala			
	215	220	225

Ile

<210> 152
 <211> 1027
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 1017, 1020
 <223> unknown base

<400> 152
 gcttcatttc tcccgactca gcttcccacc ctgggctttc cgaggtgctt 50
 tcgccgctgt cccaccact gcagccatga tctcottaac ggacacgcag 100
 aaaattggaa tgggattaac aggatttgga gtgtttttcc tgttctttgg 150
 aatgattctc ttttttgaca aagcactact ggctattgga aatgttttat 200
 ttgtagccgg cttggctttt gtaattgggt tagaaagaac attcagattc 250
 ttcttccaaa aacataaaat gaaagctaca gggtttttttc tgggtggtgt 300

attttagtc cttattggtt ggcctttgat aggcattgat ttcgaaattt 350
 atggattttt tctcttggtc aggggcttct ttcctgtcgt tggttggttt 400
 attagaagag tgccagtcct tggatccctc cttaaatttac ctggaattag 450
 atcatttgta gataaagttg gagaaagcaa caatatggta taacaacaag 500
 tgaatttgaa gactcattta aaatattgtg ttatttataa agtcatttga 550
 agaattattca gcacaaaatt aaattacatg aaatagcttg taatgttctt 600
 tacaggagtt taaaacgtat agcctacaaa gtaccagcag caaattagca 650
 aagaagcagt gaaaacaggc ttctactcaa gtgaactaag aagaagtcag 700
 caagcaaaact gagagagggtg aaatccatgt taatgatgct taagaaactc 750
 ttgaaggcta tttgtgttgt ttttccacaa tgtgcgaaac tcagccatcc 800
 ttagagaact gtggtgcctg tttcttttct ttttattttg aaggctcagg 850
 agcatccata ggcatttgct ttttagaagt gtccactgca atggcaaaaa 900
 tatttccagt tgcactgtat ctctggaagt gatgcatgaa ttcgattgga 950
 ttgtgtcatt ttaaagtatt aaaaccaagg aaacccaat tttgatgtat 1000
 ggattacttt tttttgngcn cagggcc 1027

<210> 153

<211> 138

<212> PRT

<213> Homo sapiens

<220>

<221> N-myristoylation Sites

<222> 11-16, 51-56 and 116-121

<223> N-myristoylation Sites.

<220>

<221> Transmembrane domains

<222> 12-30, 33-52, 69-89 and 93-109

<223> Transmembrane domains

<220>

<221> Aminoacyl-transfer RNA Synthetases.

<222> 49-59

<223> Aminoacyl-transfer RNA synthetases class-II protein.

<400> 153

Met	Ile	Ser	Leu	Thr	Asp	Thr	Gln	Lys	Ile	Gly	Met	Gly	Leu	Thr
1				5					10				15	

Gly	Phe	Gly	Val	Phe	Phe	Leu	Phe	Phe	Gly	Met	Ile	Leu	Phe	Phe
			20						25				30	

Asp	Lys	Ala	Leu	Leu	Ala	Ile	Gly	Asn	Val	Leu	Phe	Val	Ala	Gly
			35						40				45	

Leu	Ala	Phe	Val	Ile	Gly	Leu	Glu	Arg	Thr	Phe	Arg	Phe	Phe	Phe
			50						55				60	

Gln Lys His Lys Met Lys Ala Thr Gly Phe Phe Leu Gly Gly Val
65 70 75
Phe Val Val Leu Ile Gly Trp Pro Leu Ile Gly Met Ile Phe Glu
80 85 90
Ile Tyr Gly Phe Phe Leu Leu Phe Arg Gly Phe Phe Pro Val Val
95 100 105
Val Gly Phe Ile Arg Arg Val Pro Val Leu Gly Ser Leu Leu Asn
110 115 120
Leu Pro Gly Ile Arg Ser Phe Val Asp Lys Val Gly Glu Ser Asn
125 130 135
Asn Met Val

<210> 154
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 66
<223> unknown base

<400> 154
gaagacgtgg cggctctcgc ctgggctggt tcccggcttc atttctcccg 50
actcagcttc ccacntggg ctttccgagg tgctttcgcc gctgtcccca 100
ccactgcagc catgatctcc ttaacggaca cgcagaaaat tggaatggga 150
ttaaccggat ttggagtgtt tttcctgttc tttggaatga ttctcttttt 200
tgacaaaagca ctactggcta ttggaaatgt tttatttgta gccggcttgg 250
cttttgtaat tggtttagaa agaacattca gattcttctt ccaaaaacat 300
aaaatgaaag ctacaggttt ttttctgggt ggtgtatttg tagtccttat 350
tggttgcct ttgataggca tgatcttcga aatttatgga tttttctct 400
tgttc 405

<210> 155
<211> 1781
<212> DNA
<213> Homo sapiens

<400> 155
ggcacgaggc tgaaccagc cggctccatc tcagcttctg gtttctaagt 50
ccatgtgcc aaggctgcc ggaaggagac gccttctga gtctggatc 100
tttcttctt ctggaaatct ttgactgtgg gtagttattt atttctgaat 150
aagagcgtcc acgcatcatg gacctcgcg gactgctgaa gtctcagttc 200
ctgtgccacc tggctcttct ctacgtcttt attgcctcag ggctaatacat 250

caacaccatt cagctcttca ctctcctcct ctggcccatt aacaagcagc 300
 tcttccggaa gatcaactgc agactgtcct attgcatctc aagccagctg 350
 gtgatgctgc tggagtgggtg gtcgggcacg gaatgcacca tcttcacgga 400
 cccgcgcgcc tacctcaagt atgggaagga aaatgccatc gtggttctca 450
 accacaagtt tgaaattgac tttctgtgtg gctggagcct gtccgaacgc 500
 tttgggctgt tagggggctc caaggtcctg gccaaagaaag agctggccta 550
 tgtcccaatt atcggctgga tgtggtactt caccgagatg gtcttctgtt 600
 cgcgcaagtg ggagcaggat cgcaagacgg ttgccaccag tttgcagcac 650
 ctccgggact accccgagaa gtattttttc ctgattcact gtgagggcac 700
 acggttcacg gagaagaagc atgagatcag catgcaggtg gcccgggcca 750
 aggggctgcc tcgcctcaag catcacctgt tgccacgaac caagggcttc 800
 gccatcaccg tgaggagctt gagaaatgta gtttcagctg tatatgactg 850
 tacactcaat ttcagaaata atgaaaatcc aacactgctg ggagtcctaa 900
 acggaaagaa ataccatgca gatttgtatg ttaggaggat cccactggaa 950
 gacatccctg aagacgatga cgagtgtctg gcctggctgc acaagctcta 1000
 ccaggagaag gatgcctttc aggaggagta ctacaggacg ggcaccttcc 1050
 cagagacgcc catggtgccc ccccggcggc cctggaccct cgtgaactgg 1100
 ctgttttggg cctcgctggt gctctaccct ttctttccagt tcttggtcag 1150
 catgatcagg agcgggtctt ccctgacgct ggccagcttc atcctcgtct 1200
 tctttgtggc ctccgtggga gttogatgga tgattggtgt gacggaaatt 1250
 gacaagggct ctgcctacgg caactctgac agcaagcaga aactgaatga 1300
 ctgactcagg gaggtgtcac catccgaagg gaaccttggg gaactggtgg 1350
 cctctgcata tcctccttag tgggacacgg tgacaaaggc tgggtgagcc 1400
 cctgctgggc acggcggaag tcacgacctc tccagccagg gagtctggtc 1450
 tcaaggccgg atggggagga agatgttttg taatcttttt ttcccatgt 1500
 gcttttagtg gctttgggtt tctttttgtg cgagtgtgtg tgagaatggc 1550
 tgtgtggtga gtgtgaactt tgttctgtga tcatagaaag ggtatttttag 1600
 gctgcagggg agggcagggc tggggaccga aggggacaag ttcccccttc 1650
 atccttttgt gctgagtttt ctgtaaccct tggttgccag agataaagt 1700
 aaaagtgctt taggtgagat gactaaatta tgcctccaag aaaaaaaaaa 1750
 taaagtgctt ttctgggtca aaaaaaaaaa a 1781

<210> 156

<211> 378
 <212> PRT
 <213> Homo sapiens

<400> 156

Met	Asp	Leu	Ala	Gly	Leu	Leu	Lys	Ser	Gln	Phe	Leu	Cys	His	Leu
1				5					10					15
Val	Phe	Cys	Tyr	Val	Phe	Ile	Ala	Ser	Gly	Leu	Ile	Ile	Asn	Thr
				20					25					30
Ile	Gln	Leu	Phe	Thr	Leu	Leu	Leu	Trp	Pro	Ile	Asn	Lys	Gln	Leu
				35					40					45
Phe	Arg	Lys	Ile	Asn	Cys	Arg	Leu	Ser	Tyr	Cys	Ile	Ser	Ser	Gln
				50					55					60
Leu	Val	Met	Leu	Leu	Glu	Trp	Trp	Ser	Gly	Thr	Glu	Cys	Thr	Ile
				65					70					75
Phe	Thr	Asp	Pro	Arg	Ala	Tyr	Leu	Lys	Tyr	Gly	Lys	Glu	Asn	Ala
				80					85					90
Ile	Val	Val	Leu	Asn	His	Lys	Phe	Glu	Ile	Asp	Phe	Leu	Cys	Gly
				95					100					105
Trp	Ser	Leu	Ser	Glu	Arg	Phe	Gly	Leu	Leu	Gly	Gly	Ser	Lys	Val
				110					115					120
Leu	Ala	Lys	Lys	Glu	Leu	Ala	Tyr	Val	Pro	Ile	Ile	Gly	Trp	Met
				125					130					135
Trp	Tyr	Phe	Thr	Glu	Met	Val	Phe	Cys	Ser	Arg	Lys	Trp	Glu	Gln
				140					145					150
Asp	Arg	Lys	Thr	Val	Ala	Thr	Ser	Leu	Gln	His	Leu	Arg	Asp	Tyr
				155					160					165
Pro	Glu	Lys	Tyr	Phe	Phe	Leu	Ile	His	Cys	Glu	Gly	Thr	Arg	Phe
				170					175					180
Thr	Glu	Lys	Lys	His	Glu	Ile	Ser	Met	Gln	Val	Ala	Arg	Ala	Lys
				185					190					195
Gly	Leu	Pro	Arg	Leu	Lys	His	His	Leu	Leu	Pro	Arg	Thr	Lys	Gly
				200					205					210
Phe	Ala	Ile	Thr	Val	Arg	Ser	Leu	Arg	Asn	Val	Val	Ser	Ala	Val
				215					220					225
Tyr	Asp	Cys	Thr	Leu	Asn	Phe	Arg	Asn	Asn	Glu	Asn	Pro	Thr	Leu
				230					235					240
Leu	Gly	Val	Leu	Asn	Gly	Lys	Lys	Tyr	His	Ala	Asp	Leu	Tyr	Val
				245					250					255
Arg	Arg	Ile	Pro	Leu	Glu	Asp	Ile	Pro	Glu	Asp	Asp	Asp	Glu	Cys
				260					265					270
Ser	Ala	Trp	Leu	His	Lys	Leu	Tyr	Gln	Glu	Lys	Asp	Ala	Phe	Gln
				275					280					285
Glu	Glu	Tyr	Tyr	Arg	Thr	Gly	Thr	Phe	Pro	Glu	Thr	Pro	Met	Val

290	295	300
Pro Pro Arg Arg Pro Trp Thr Leu Val	Asn Trp Leu Phe Trp Ala	
305	310	315
Ser Leu Val Leu Tyr Pro Phe Phe Gln	Phe Leu Val Ser Met Ile	
320	325	330
Arg Ser Gly Ser Ser Leu Thr Leu Ala	Ser Phe Ile Leu Val Phe	
335	340	345
Phe Val Ala Ser Val Gly Val Arg Trp	Met Ile Gly Val Thr Glu	
350	355	360
Ile Asp Lys Gly Ser Ala Tyr Gly Asn	Ser Asp Ser Lys Gln Lys	
365	370	375

Leu Asn Asp

<210> 157
 <211> 1849
 <212> DNA
 <213> Homo sapiens

<400> 157
 ctgaggcggc ggtagcatgg agggggagag tacgtcggcg gtgctctcgg 50
 gctttgtgct cggcgcactc gctttccagc acctcaacac ggactcggac 100
 acggaaggtt ttcttcttgg ggaagtaaaa ggtgaagcca agaacagcat 150
 tactgattcc caaatggatg atgttgaagt tgtttataca attgacattc 200
 agaaatatat tccatgctat cagcttttta gcttttataa ttcttcaggc 250
 gaagtaaatg agcaagcact gaagaaaata ttatcaaagc tcaaaaagaa 300
 tgtggttagt tggtacaaat tccgtcgtca ttcagatcag atcatgacgt 350
 ttagagagag gctgcttcac aaaaacttgc aggagcattt ttcaaaccac 400
 gaccttgttt ttctgctatt aacaccaagt ataataacag aaagctgctc 450
 tactcatcga ctggaacatt cttatatata acctcaaaaa ggactttttc 500
 acagggtacc tttagtgggt gccaatctgg gcatgtctga acaactgggt 550
 tataaaactg tatcaggttc ctgtatgtcc actggtttta gccgagcagt 600
 acaaacacac agctctaaat tttttgaaga agatggatcc ttaaaggagg 650
 tacataagat aaatgaaatg tatgcttcat tacaagagga attaaagagt 700
 atatgcaaaa aagtggaaga cagtgaacaa gcagtagata aactagtaaa 750
 ggatgtaaac agattaaaac gagaaattga gaaaaggaga ggagcacaga 800
 ttcaggcagc aagagagaag aacatccaaa aagaccctca ggagaacatt 850
 tttctttgtc aggcatcag gacctttttt ccaaattctg aatttcttca 900
 ttcattgtgt atgtctttta aaaatagaca tgtttctaaa agtagctgta 950

actacaacca ccatctcgat gtagtagaca atctgacctt aatggtagaa 1000
cacactgaca ttcctgaagc tagtccagct agtacaccac aaatcattaa 1050
gcataaagcc ttagacttag atgacagatg gcaattcaag agatctcggc 1100
tgttagatac acaagacaaa cgatctaaag caaatactgg tagtagtaac 1150
caagataaag catccaaaat gagcagccca gaaacagatg aagaaattga 1200
aaagatgaag gggttttggtg aatattcacg gtctcctaca ttttgatcct 1250
tttaacctta caaggagatt tttttatttg gctgatgggt aaagccaaac 1300
atctctattg tttttactat gttgagctac ttgcagtaag ttcatttggt 1350
tttactatgt tcacctgttt gcagtaatac acagataact cttagtgcac 1400
ttacttcaca aagtactttt tcaaacatca gatgctttta tttccaaacc 1450
tttttttcac ctttcactaa gttgttgagg ggaaggctta cacagacaca 1500
ttcttttagaa ttggaaaagt gagaccaggc acagtggctc acacctgtaa 1550
tcccagcact tagggaagac aagtcaggag gattgattga agctaggagt 1600
tagagaccag cctgggcaac gtattgagac catgtctatt aaaaaataaa 1650
atggaaaagc aagaatagcc ttattttcaa aatatggaaa gaaatttata 1700
tgaaaattta tctgagtcac taaaattctc cttaagtgat acttttttag 1750
aagtacatta tggctagagt tgccagataa aatgctggat atcatgcaat 1800
aaatttgcaa aacatcatct aaaattttaa aaaaaaaaaa aaaaaaaaaa 1849

<210> 158

<211> 409

<212> PRT

<213> Homo sapiens

<400> 158

Met	Glu	Gly	Glu	Ser	Thr	Ser	Ala	Val	Leu	Ser	Gly	Phe	Val	Leu
1				5					10					15
Gly	Ala	Leu	Ala	Phe	Gln	His	Leu	Asn	Thr	Asp	Ser	Asp	Thr	Glu
				20					25					30
Gly	Phe	Leu	Leu	Gly	Glu	Val	Lys	Gly	Glu	Ala	Lys	Asn	Ser	Ile
				35					40					45
Thr	Asp	Ser	Gln	Met	Asp	Asp	Val	Glu	Val	Val	Tyr	Thr	Ile	Asp
				50					55					60
Ile	Gln	Lys	Tyr	Ile	Pro	Cys	Tyr	Gln	Leu	Phe	Ser	Phe	Tyr	Asn
				65					70					75
Ser	Ser	Gly	Glu	Val	Asn	Glu	Gln	Ala	Leu	Lys	Lys	Ile	Leu	Ser
				80					85					90
Asn	Val	Lys	Lys	Asn	Val	Val	Gly	Trp	Tyr	Lys	Phe	Arg	Arg	His
				95					100					105

Ser	Asp	Gln	Ile	Met	Thr	Phe	Arg	Glu	Arg	Leu	Leu	His	Lys	Asn	
				110					115					120	
Leu	Gln	Glu	His	Phe	Ser	Asn	Gln	Asp	Leu	Val	Phe	Leu	Leu	Leu	
				125					130					135	
Thr	Pro	Ser	Ile	Ile	Thr	Glu	Ser	Cys	Ser	Thr	His	Arg	Leu	Glu	
				140					145					150	
His	Ser	Leu	Tyr	Lys	Pro	Gln	Lys	Gly	Leu	Phe	His	Arg	Val	Pro	
				155					160					165	
Leu	Val	Val	Ala	Asn	Leu	Gly	Met	Ser	Glu	Gln	Leu	Gly	Tyr	Lys	
				170					175					180	
Thr	Val	Ser	Gly	Ser	Cys	Met	Ser	Thr	Gly	Phe	Ser	Arg	Ala	Val	
				185					190					195	
Gln	Thr	His	Ser	Ser	Lys	Phe	Phe	Glu	Glu	Asp	Gly	Ser	Leu	Lys	
				200					205					210	
Glu	Val	His	Lys	Ile	Asn	Glu	Met	Tyr	Ala	Ser	Leu	Gln	Glu	Glu	
				215					220					225	
Leu	Lys	Ser	Ile	Cys	Lys	Lys	Val	Glu	Asp	Ser	Glu	Gln	Ala	Val	
				230					235					240	
Asp	Lys	Leu	Val	Lys	Asp	Val	Asn	Arg	Leu	Lys	Arg	Glu	Ile	Glu	
				245					250					255	
Lys	Arg	Arg	Gly	Ala	Gln	Ile	Gln	Ala	Ala	Arg	Glu	Lys	Asn	Ile	
				260					265					270	
Gln	Lys	Asp	Pro	Gln	Glu	Asn	Ile	Phe	Leu	Cys	Gln	Ala	Leu	Arg	
				275					280					285	
Thr	Phe	Phe	Pro	Asn	Ser	Glu	Phe	Leu	His	Ser	Cys	Val	Met	Ser	
				290					295					300	
Leu	Lys	Asn	Arg	His	Val	Ser	Lys	Ser	Ser	Cys	Asn	Tyr	Asn	His	
				305					310					315	
His	Leu	Asp	Val	Val	Asp	Asn	Leu	Thr	Leu	Met	Val	Glu	His	Thr	
				320					325					330	
Asp	Ile	Pro	Glu	Ala	Ser	Pro	Ala	Ser	Thr	Pro	Gln	Ile	Ile	Lys	
				335					340					345	
His	Lys	Ala	Leu	Asp	Leu	Asp	Asp	Arg	Trp	Gln	Phe	Lys	Arg	Ser	
				350					355					360	
Arg	Leu	Leu	Asp	Thr	Gln	Asp	Lys	Arg	Ser	Lys	Ala	Asn	Thr	Gly	
				365					370					375	
Ser	Ser	Asn	Gln	Asp	Lys	Ala	Ser	Lys	Met	Ser	Ser	Pro	Glu	Thr	
				380					385					390	
Asp	Glu	Glu	Ile	Glu	Lys	Met	Lys	Gly	Phe	Gly	Glu	Tyr	Ser	Arg	
				395					400					405	
Ser	Pro	Thr	Phe												

<210> 159
<211> 2651
<212> DNA
<213> Homo sapiens

<400> 159
ggcacagccg cgcggcggag ggcagagtca gccgagccga gtccagccgg 50
acgagcggac cagcgcaggg cagcccaagc agcgcgcagc gaacgcccgc 100
cgccgcccac accctctgcg gtccccgcgg cgcttgcac ccttccctcc 150
ttccccgcgt ccccgctcg ccggccagtc agcttgccgg gtctgctgcc 200
ccgcgaaacc ccgaggtcac cagcccgccg ctctgcttcc ctgggcccgc 250
cgccgcctcc acgcccctct tctccctgg ccgggocct ggcaccgggg 300
accgttgctt gacgcgaggc ccagctctac ttttgcgcc gcgtctcttc 350
cgctgctcg cctcttcac caactccaac tcttctccc tccagctcca 400
ctcgctagtc cccgactccg ccagccctcg gcccgctgcc gtagcgccgc 450
ttcccgctcg gtcccaaagg tgggaacgcg tccgccccgg ccgcacccat 500
ggcacgggtc ggcttgcccg cgcttctctg caccctggca gtgctcagcg 550
ccgcgctgct ggctgcccag ctcaagtcca aaagtgtctc ggaagtgcga 600
cgtctttacg tgtccaaagg cttcaacaag aacgatgcc ccctccacga 650
gatcaacggt gatcatttga agatctgtcc ccagggttct acctgctgct 700
ctcaagagat ggaggagaag tacagcctgc aaagtaaaga tgatttcaaa 750
agtgtggtca gcgaacagtg caatcatttg caagctgtct ttgcttcacg 800
ttacaagaag tttgatgaat tcttcaaaga actacttgaa aatgcagaga 850
aatccctgaa tgatatgttt gtgaagacat atggccattt atacatgcaa 900
aattctgagc tatttaaaga tctcttcgta gagttgaaac gttactacgt 950
ggtgggaaat gtgaacctgg aagaaatgct aaatgacttc tgggctcgcc 1000
tcttgagcgc gatgttccgc ctggtgaact ccagtagca ctttacagat 1050
gagtatctgg aatgtgtgag caagtatacg gagcagctga agcccttcgg 1100
agatgtccct cgcaaatgga agctccaggt tactcgtgct tttgtagcag 1150
cccgtagctt cgtcaaggc ttagcggttg cgggagatgt cgtgagcaag 1200
gtctccgtgg taaaccccac agcccagtgt acccatgccc tgttgaagat 1250
gatctactgc tcccactgcc ggggtctcgt gactgtgaag ccatgttaca 1300
actactgctc aaacatcatg agaggctgtt tggccaacca aggggatctc 1350
gattttgaat ggaacaattt catagatgct atgctgatgg tggcagagag 1400
gctagagggg cctttcaaca ttgaatcggg catggatccc atcgatgtga 1450

agatttctga tgctattatg aacatgcagg ataatagtgt tcaagtgtct 1500
 cagaagggtt tccagggatg tggaccccc aagcccctcc cagctggacg 1550
 aatttctcgt tccatctctg aaagtgcctt cagtgtctgc ttcagaccac 1600
 atcaccccca ggaacgcccc accacagcag ctggcaactag tttggaccga 1650
 ctgggttactg atgtcaagga gaaactgaaa caggccaaga aattctgggtc 1700
 ctcccttccg agcaacgttt gcaacgatga gaggatggct gcaggaaacg 1750
 gcaatgagga tgactgttgg aatgggaaaag gcaaaagcag gtacctgttt 1800
 gcagtgcag gaaatggatt agccaaccag ggcaacaacc cagaggtcca 1850
 ggttgacacc agcaaaccag acatactgat ccttcgtcaa atcatggctc 1900
 ttcgagtgat gaccagcaag atgaagaatg catacaatgg gaacgacgtg 1950
 gacttctttg atatcagtga tgaaagtagt ggagaaggaa gtggaagtgg 2000
 ctgtgagtat cagcagtgcc cttcagagtt tgactacaat gccactgacc 2050
 atgctgggaa gagtgccaat gagaaagccg acagtgtctg tgtccgtcct 2100
 ggggcacagg cctacctcct cactgtcttc tgcatcttgt tcttggttat 2150
 gcagagagag tggagataat tctcaaactc tgagaaaaag tgttcatcaa 2200
 aaagttaaaa ggcaccagtt atcacttttc taccatccta gtgactttgc 2250
 tttttaaatg aatggacaac aatgtacagt ttttactatg tggccactgg 2300
 ttaagaagt gctgactttg ttttctcatt cagttttggg aggaaaaggg 2350
 actgtgcatt gagttggttc ctgctcccc aaaccatgtt aaacgtggct 2400
 aacagtgtag gtacagaact atagttagtt gtgcatttgt gattttatca 2450
 ctctattatt tgtttgtatg tttttttctc atttcgtttg tgggtttttt 2500
 tttccaactg tgatctcgcc ttgtttctta caagcaaacc agggtcctt 2550
 cttggcacgt aacatgtacg tatttctgaa atattaaata gctgtacaga 2600
 agcaggtttt atttatcatg ttatcttatt aaaagaaaaa gcccaaaaag 2650
 c 2651

<210> 160

<211> 556

<212> PRT

<213> Homo sapiens

<400> 160

Met	Ala	Arg	Phe	Gly	Leu	Pro	Ala	Leu	Leu	Cys	Thr	Leu	Ala	Val
1				5					10					15

Leu	Ser	Ala	Ala	Leu	Leu	Ala	Ala	Glu	Leu	Lys	Ser	Lys	Ser	Cys
				20					25					30

Ser	Glu	Val	Arg	Arg	Leu	Tyr	Val	Ser	Lys	Gly	Phe	Asn	Lys	Asn
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

141

35										40					45				
Asp	Ala	Pro	Leu	His	Glu	Ile	Asn	Gly	Asp	His	Leu	Lys	Ile	Cys					
				50					55					60					
Pro	Gln	Gly	Ser	Thr	Cys	Cys	Ser	Gln	Glu	Met	Glu	Glu	Lys	Tyr					
				65					70					75					
Ser	Leu	Gln	Ser	Lys	Asp	Asp	Phe	Lys	Ser	Val	Val	Ser	Glu	Gln					
				80					85					90					
Cys	Asn	His	Leu	Gln	Ala	Val	Phe	Ala	Ser	Arg	Tyr	Lys	Lys	Phe					
				95					100					105					
Asp	Glu	Phe	Phe	Lys	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu					
				110					115					120					
Asn	Asp	Met	Phe	Val	Lys	Thr	Tyr	Gly	His	Leu	Tyr	Met	Gln	Asn					
				125					130					135					
Ser	Glu	Leu	Phe	Lys	Asp	Leu	Phe	Val	Glu	Leu	Lys	Arg	Tyr	Tyr					
				140					145					150					
Val	Val	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp					
				155					160					165					
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Arg	Leu	Val	Asn	Ser	Gln	Tyr					
				170					175					180					
His	Phe	Thr	Asp	Glu	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Glu					
				185					190					195					
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Leu	Gln					
				200					205					210					
Val	Thr	Arg	Ala	Phe	Val	Ala	Ala	Arg	Thr	Phe	Ala	Gln	Gly	Leu					
				215					220					225					
Ala	Val	Ala	Gly	Asp	Val	Val	Ser	Lys	Val	Ser	Val	Val	Asn	Pro					
				230					235					240					
Thr	Ala	Gln	Cys	Thr	His	Ala	Leu	Leu	Lys	Met	Ile	Tyr	Cys	Ser					
				245					250					255					
His	Cys	Arg	Gly	Leu	Val	Thr	Val	Lys	Pro	Cys	Tyr	Asn	Tyr	Cys					
				260					265					270					
Ser	Asn	Ile	Met	Arg	Gly	Cys	Leu	Ala	Asn	Gln	Gly	Asp	Leu	Asp					
				275					280					285					
Phe	Glu	Trp	Asn	Asn	Phe	Ile	Asp	Ala	Met	Leu	Met	Val	Ala	Glu					
				290					295					300					
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile					
				305					310					315					
Asp	Val	Lys	Ile	Ser	Asp	Ala	Ile	Met	Asn	Met	Gln	Asp	Asn	Ser					
				320					325					330					
Val	Gln	Val	Ser	Gln	Lys	Val	Phe	Gln	Gly	Cys	Gly	Pro	Pro	Lys					
				335					340					345					
Pro	Leu	Pro	Ala	Gly	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Glu	Ser	Ala					

	350		355		360
Phe Ser Ala Arg	Phe Arg Pro His His	Pro Glu Glu Arg Pro Thr			
	365	370			375
Thr Ala Ala Gly	Thr Ser Leu Asp Arg	Leu Val Thr Asp Val Lys			
	380	385			390
Glu Lys Leu Lys	Gln Ala Lys Lys Phe	Trp Ser Ser Leu Pro Ser			
	395	400			405
Asn Val Cys Asn	Asp Glu Arg Met Ala	Ala Gly Asn Gly Asn Glu			
	410	415			420
Asp Asp Cys Trp	Asn Gly Lys Gly Lys	Ser Arg Tyr Leu Phe Ala			
	425	430			435
Val Thr Gly Asn	Gly Leu Ala Asn Gln	Gly Asn Asn Pro Glu Val			
	440	445			450
Gln Val Asp Thr	Ser Lys Pro Asp Ile	Leu Ile Leu Arg Gln Ile			
	455	460			465
Met Ala Leu Arg	Val Met Thr Ser Lys	Met Lys Asn Ala Tyr Asn			
	470	475			480
Gly Asn Asp Val	Asp Phe Phe Asp Ile	Ser Asp Glu Ser Ser Gly			
	485	490			495
Glu Gly Ser Gly	Ser Gly Cys Glu Tyr	Gln Gln Cys Pro Ser Glu			
	500	505			510
Phe Asp Tyr Asn	Ala Thr Asp His Ala	Gly Lys Ser Ala Asn Glu			
	515	520			525
Lys Ala Asp Ser	Ala Gly Val Arg Pro	Gly Ala Gln Ala Tyr Leu			
	530	535			540
Leu Thr Val Phe	Cys Ile Leu Phe Leu	Val Met Gln Arg Glu Trp			
	545	550			555

Arg

<210> 161

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 161

ctccgtggta aaccccacag ccc 23

<210> 162

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 162
tcacatcgat gggatccatg accg 24

<210> 163
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 163
ggtctcgtga ctgtgaagcc atgttacaac tactgctcaa acatcatgag 50

<210> 164
<211> 870
<212> DNA
<213> Homo sapiens

<400> 164
ctcgccctca aatgggaacg ctggcctggg actaaagcat agaccaccag 50
gctgagtatc ctgacctgag tcatccccag ggatcaggag cctccagcag 100
ggaaccttcc attatattct tcaagcaact tacagctgca ccgacagttg 150
cgatgaaagt tctaattctct tccctcctcc tgttgctgcc actaatgctg 200
atgtccatgg tctctagcag cctgaatcca ggggtcgcca gagggccacag 250
ggaccgaggc caggcttcta ggagatggct ccaggaaggc ggccaagaat 300
gtgagtgcaa agattgggtc ctgagagccc cgagaagaaa attcatgaca 350
gtgtctgggc tgccaaagaa gcagtgcctc tgtgatcatt tcaagggcaa 400
tgtgaagaaa acaagacacc aaaggcacca cagaaagcca aacaagcatt 450
ccagagcctg ccagcaattt ctcaaacaat gtcagctaag aagctttgct 500
ctgcctttgt aggagctctg agcgcccact cttccaatta aacatttctca 550
gccaagaaga cagtgagcac acctaccaga cactcttctt ctcccacctc 600
actotcccac tgtaccaccc cctaaatcat tccagtgtc tcaaaaagca 650
tgtttttcaa gatcattttg tttgttgctc tctctagtgt cttcttctct 700
cgtcagtctt agcctgtgcc ctccccttac ccaggcttag gcttaattac 750
ctgaaagatt ccaggaaact gtagcttcct agctagtgtc atttaacctt 800
aaatgcaatc aggaaagtag caaacagaag tcaataaata tttttaaatg 850
tcaaaaaaaaa aaaaaaaaaa 870

<210> 165
<211> 119
<212> PRT
<213> Homo sapiens

<400> 165
Met Lys Val Leu Ile Ser Ser Leu Leu Leu Leu Pro Leu Met

1	5	10	15
Leu Met Ser Met Val Ser Ser Ser Leu Asn Pro Gly Val Ala Arg	20	25	30
Gly His Arg Asp Arg Gly Gln Ala Ser Arg Arg Trp Leu Gln Glu	35	40	45
Gly Gly Gln Glu Cys Glu Cys Lys Asp Trp Phe Leu Arg Ala Pro	50	55	60
Arg Arg Lys Phe Met Thr Val Ser Gly Leu Pro Lys Lys Gln Cys	65	70	75
Pro Cys Asp His Phe Lys Gly Asn Val Lys Lys Thr Arg His Gln	80	85	90
Arg His His Arg Lys Pro Asn Lys His Ser Arg Ala Cys Gln Gln	95	100	105
Phe Leu Lys Gln Cys Gln Leu Arg Ser Phe Ala Leu Pro Leu	110	115	

<210> 166

<211> 551

<212> DNA

<213> Homo sapiens

<400> 166

```

aatggctgtc ttagtacttc gcctgacagt tgtcctggga ctgcttgtct 50
tattcctgac ctgctatgca gacgacaaac cagacaagcc agacgacaag 100
ccagacgact cgggcaaaga cccaaagcca gacttcccca aattcctaag 150
cctcctgggc acagagatca ttgagaatgc agtcgagttc atcctccgct 200
ccatgtccag gagcacagga tttatggaat ttgatgataa tgaaggaaaa 250
cattcatcaa agtgacatcc tcaggacaca cccatgtggc tcctggacaa 300
tccaagagca gccaaatcct gcttttccag ttgggtcca caagtcctcc 350
aggacagagc cctcaaagca actcccaacg agttctcagg attcaggctc 400
tggcttcaac caaacagaac tcattttgaa caccctgact gcatttttgc 450
ttttagaaag ttagaataaa tatggcgctt tgggatcaca tagttgatgg 500
agaggaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
a 551

```

<210> 167

<211> 87

<212> PRT

<213> Homo sapiens

<400> 167

Met Ala Val Leu Val Leu Arg Leu Thr Val Val Leu Gly Leu Leu	1	5	10	15
Val Leu Phe Leu Thr Cys Tyr Ala Asp Asp Lys Pro Asp Lys Pro				

	20		25		30
Asp Asp Lys Pro Asp Asp Ser Gly Lys Asp Pro Lys Pro Asp Phe	35		40		45
Pro Lys Phe Leu Ser Leu Leu Gly Thr Glu Ile Ile Glu Asn Ala	50		55		60
Val Glu Phe Ile Leu Arg Ser Met Ser Arg Ser Thr Gly Phe Met	65		70		75
Glu Phe Asp Asp Asn Glu Gly Lys His Ser Ser Lys	80		85		

<210> 168

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 168

```

ggacgccagc gcctgcagag gctgagcagg gaaaaagcca gtgccccagc 50
ggaagcacag ctcagagctg gtctgccatg gacatcctgg tcccactcct 100
gcagctgctg gtgctgcttc ttaccctgcc cctgcacctc atggctctgc 150
tgggctgctg gcagcccctg tgcaaaagct acttccccta cctgatggcc 200
gtgctgactc ccaagagcaa ccgcaagatg gagagcaaga aacgggagct 250
cttcagccag ataaaggggc ttacaggagc ctccgggaaa gtggccctac 300
tgagactggg ctgcggaacc ggagccaact ttcagttcta cccaccgggc 350
tgcagggtca cctgcctaga cccaaatccc cactttgaga agttcctgac 400
aaagagcatg gctgagaaca ggacacctca atatgagcgg tttgtggtgg 450
ctcctggaga ggacatgaga cagctggctg atggctccat ggatgtggtg 500
gtctgcactc tgggtgctgtg ctctgtgcag agcccaagga aggtcctgca 550
ggaggtccgg agagtactga gaccgggagg tgtgctcttt ttctgggagc 600
atgtggcaga accatatgga agctgggcct tcatgtggca gcaagttttc 650
gagcccacct ggaaacacat tggggatggc tgctgcctca ccagagagac 700
ctggaaggat cttgagaacg cccagttctc cgaaatccaa atggaacgac 750
agccccctcc cttgaagtgg ctacctgttg ggccccacat catgggaaag 800
gctgtcaaac aatctttccc aagctccaag gcactcattt gtccttccc 850
cagcctccaa ttagaacaag ccacccacca gcctatctat cttccactga 900
gagggaccta gcagaatgag agaagacatt catgtaccac ctactagtcc 950
ctctctcccc aacctctgcc agggcaatct ctaacttcaa tcccgccttc 1000
gacagtgaaa aagctctact tctacgtga cccagggagg aaacactagg 1050
accctgttgt atcctcaact gcaagtttct ggactagtct cccaacgttt 1100

```

gcctcccaat gttgtccctt tccttcgttc ccatggtaaa gctcctctcg 1150
ctttcctcct gaggtacac ccatgcgtct ctaggaactg gtcacaaaag 1200
tcatggtgcc tgcatccctg ccaagcccc ctgaccctct ctccccacta 1250
ccaccttctt cctgagctgg gggcaccagg gagaatcaga gatgctgggg 1300
atgccagagc aagactcaaa gaggcagagg ttttgttctc aaatattttt 1350
taataaatag acgaaaccac g 1371

<210> 169

<211> 277

<212> PRT

<213> Homo sapiens

<400> 169

Met	Asp	Ile	Leu	Val	Pro	Leu	Leu	Gln	Leu	Leu	Val	Leu	Leu	Leu	1	5	10	15
Thr	Leu	Pro	Leu	His	Leu	Met	Ala	Leu	Leu	Gly	Cys	Trp	Gln	Pro	20	25	30	
Leu	Cys	Lys	Ser	Tyr	Phe	Pro	Tyr	Leu	Met	Ala	Val	Leu	Thr	Pro	35	40	45	
Lys	Ser	Asn	Arg	Lys	Met	Glu	Ser	Lys	Lys	Arg	Glu	Leu	Phe	Ser	50	55	60	
Gln	Ile	Lys	Gly	Leu	Thr	Gly	Ala	Ser	Gly	Lys	Val	Ala	Leu	Leu	65	70	75	
Glu	Leu	Gly	Cys	Gly	Thr	Gly	Ala	Asn	Phe	Gln	Phe	Tyr	Pro	Pro	80	85	90	
Gly	Cys	Arg	Val	Thr	Cys	Leu	Asp	Pro	Asn	Pro	His	Phe	Glu	Lys	95	100	105	
Phe	Leu	Thr	Lys	Ser	Met	Ala	Glu	Asn	Arg	His	Leu	Gln	Tyr	Glu	110	115	120	
Arg	Phe	Val	Val	Ala	Pro	Gly	Glu	Asp	Met	Arg	Gln	Leu	Ala	Asp	125	130	135	
Gly	Ser	Met	Asp	Val	Val	Val	Cys	Thr	Leu	Val	Leu	Cys	Ser	Val	140	145	150	
Gln	Ser	Pro	Arg	Lys	Val	Leu	Gln	Glu	Val	Arg	Arg	Val	Leu	Arg	155	160	165	
Pro	Gly	Gly	Val	Leu	Phe	Phe	Trp	Glu	His	Val	Ala	Glu	Pro	Tyr	170	175	180	
Gly	Ser	Trp	Ala	Phe	Met	Trp	Gln	Gln	Val	Phe	Glu	Pro	Thr	Trp	185	190	195	
Lys	His	Ile	Gly	Asp	Gly	Cys	Cys	Leu	Thr	Arg	Glu	Thr	Trp	Lys	200	205	210	
Asp	Leu	Glu	Asn	Ala	Gln	Phe	Ser	Glu	Ile	Gln	Met	Glu	Arg	Gln	215	220	225	

Pro	Pro	Pro	Leu	Lys	Trp	Leu	Pro	Val	Gly	Pro	His	Ile	Met	Gly
				230					235					240
Lys	Ala	Val	Lys	Gln	Ser	Phe	Pro	Ser	Ser	Lys	Ala	Leu	Ile	Cys
				245					250					255
Ser	Phe	Pro	Ser	Leu	Gln	Leu	Glu	Gln	Ala	Thr	His	Gln	Pro	Ile
				260					265					270
Tyr	Leu	Pro	Leu	Arg	Gly	Thr								
				275										

<210> 170

<211> 1621

<212> DNA

<213> Homo sapiens

<400> 170

```

gtgggattta tttgagtgc agatcgtttt ctcagtgggtg gtggaagttg 50
cctcatcgca ggcagatgtt ggggctttgt ccgaacagct cccctctgcc 100
agcttctgta gataagggtt aaaaactaat atttatatga cagaagaaaa 150
agatgtcatt ccgtaaagta aacatcatca tcttggtcct ggctgttgct 200
ctcttcttac tggttttgca ccataacttc ctcagcttga gcagtttggt 250
aaggaatgag gttacagatt caggaattgt agggcctcaa cctatagact 300
ttgtcccaaa tgctctccga catgcagtag atgggagaca agaggagatt 350
cctgtgggtca tcgctgcatc tgaagacagg cttggggggg ccattgcagc 400
tataaacagc attcagcaca acactcgctc caatgtgatt ttctacattg 450
ttactctcaa caatacagca gaccatctcc ggtcctgggt caacagtgat 500
tccctgaaaa gcatcagata caaaattgtc aattttgacc ctaaactttt 550
ggaaggaaaa gtaaaggagg atcctgacca gggggaatcc atgaaacctt 600
taacctttgc aaggttctac ttgccaatc tggttcccag cgcaaagaag 650
gccatataca tggatgatga tgtaattgtg caagggtgata ttcttgccct 700
ttacaataca gcactgaagc caggacatgc agctgcattt tcagaagatt 750
gtgattcagc ctctactaaa gttgtcatcc gtggagcagg aaaccagtac 800
aattacattg gctatcttga ctataaaaag gaaagaattc gtaagctttc 850
catgaaagcc agcacttgct catttaatcc tggagttttt gttgcaaacc 900
tgacggaatg gaaacgacag aatataacta accaactgga aaaatggatg 950
aaactcaatg tagaagaggg actgtatagc agaaccctgg ctggtagcat 1000
cacaacacct cctctgctta tcgtatttta tcaacagcac tctaccatcg 1050
atcctatgtg gaatgtccgc caccttggtt ccagtgtctg aaaacgatat 1100
tcacctcagt ttgtaaaggc tgccaagtta ctccattgga atggacattt 1150

```

gaagccatgg ggaaggactg cttcatatac tgatgtttgg gaaaaatggt 1200
 atattccaga cccaacaggc aaattcaacc taatccgaag atataccgag 1250
 atctcaaaca taaagtgaaa cagaatttga actgtaagca agcattttctc 1300
 aggaagtcct ggaagatagc atgcatggga agtaacagtt gctagggttc 1350
 aatgcctatc ggtagcaagc catggaaaaa gatgtgtcag ctaggtaaag 1400
 atgacaaact gccctgtctg gcagtcagct tcccagacag actatagact 1450
 ataaatatgt ctccatctgc cttaccaagt gttttcttac tacaatgctg 1500
 aatgactgga aagaagaact gatatggcta gttcagctag ctggtacaga 1550
 taattcaaaa ctgctgttgg ttttaatttt gtaacctgtg gcctgatctg 1600
 taaataaaac ttacattttt c 1621

<210> 171

<211> 371

<212> PRT

<213> Homo sapiens

<400> 171

Met	Ser	Phe	Arg	Lys	Val	Asn	Ile	Ile	Ile	Leu	Val	Leu	Ala	Val	1	5	10	15
Ala	Leu	Phe	Leu	Leu	Val	Leu	His	His	Asn	Phe	Leu	Ser	Leu	Ser	20	25	30	
Ser	Leu	Leu	Arg	Asn	Glu	Val	Thr	Asp	Ser	Gly	Ile	Val	Gly	Pro	35	40	45	
Gln	Pro	Ile	Asp	Phe	Val	Pro	Asn	Ala	Leu	Arg	His	Ala	Val	Asp	50	55	60	
Gly	Arg	Gln	Glu	Glu	Ile	Pro	Val	Val	Ile	Ala	Ala	Ser	Glu	Asp	65	70	75	
Arg	Leu	Gly	Gly	Ala	Ile	Ala	Ala	Ile	Asn	Ser	Ile	Gln	His	Asn	80	85	90	
Thr	Arg	Ser	Asn	Val	Ile	Phe	Tyr	Ile	Val	Thr	Leu	Asn	Asn	Thr	95	100	105	
Ala	Asp	His	Leu	Arg	Ser	Trp	Leu	Asn	Ser	Asp	Ser	Leu	Lys	Ser	110	115	120	
Ile	Arg	Tyr	Lys	Ile	Val	Asn	Phe	Asp	Pro	Lys	Leu	Leu	Glu	Gly	125	130	135	
Lys	Val	Lys	Glu	Asp	Pro	Asp	Gln	Gly	Glu	Ser	Met	Lys	Pro	Leu	140	145	150	
Thr	Phe	Ala	Arg	Phe	Tyr	Leu	Pro	Ile	Leu	Val	Pro	Ser	Ala	Lys	155	160	165	
Lys	Ala	Ile	Tyr	Met	Asp	Asp	Asp	Val	Ile	Val	Gln	Gly	Asp	Ile	170	175	180	
Leu	Ala	Leu	Tyr	Asn	Thr	Ala	Leu	Lys	Pro	Gly	His	Ala	Ala	Ala				

	185		190		195
Phe Ser Glu Asp	Cys 200	Asp Ser Ala Ser	Thr 205	Lys Val Val Ile	Arg 210
Gly Ala Gly Asn	Gln 215	Tyr Asn Tyr Ile	Gly 220	Tyr Leu Asp Tyr	Lys 225
Lys Glu Arg Ile	Arg 230	Lys Leu Ser Met	Lys 235	Ala Ser Thr Cys	Ser 240
Phe Asn Pro Gly	Val 245	Phe Val Ala Asn	Leu 250	Thr Glu Trp Lys	Arg 255
Gln Asn Ile Thr	Asn 260	Gln Leu Glu Lys	Trp 265	Met Lys Leu Asn	Val 270
Glu Glu Gly Leu	Tyr 275	Ser Arg Thr Leu	Ala 280	Gly Ser Ile Thr	Thr 285
Pro Pro Leu Leu	Ile 290	Val Phe Tyr Gln	Gln 295	His Ser Thr Ile	Asp 300
Pro Met Trp Asn	Val 305	Arg His Leu Gly	Ser 310	Ser Ala Gly Lys	Arg 315
Tyr Ser Pro Gln	Phe 320	Val Lys Ala Ala	Lys 325	Leu Leu His Trp	Asn 330
Gly His Leu Lys	Pro 335	Trp Gly Arg Thr	Ala 340	Ser Tyr Thr Asp	Val 345
Trp Glu Lys Trp	Tyr 350	Ile Pro Asp Pro	Thr 355	Gly Lys Phe Asn	Leu 360
Ile Arg Arg Tyr	Thr 365	Glu Ile Ser Asn	Ile 370	Lys	

<210> 172
 <211> 585
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 71, 76, 86, 91, 162, 220, 269, 281
 <223> unknown base

<400> 172
 tgggtttttgc cccataaatt ccctcagctt gagcagtttg ttaaggaatg 50
 aggttacaga ttcaggaatt ntaggnctc aacctntaga ntttgtccca 100
 aatgttctcc gacatgcagt agatgggaga caagaggaga ttctgtggt 150
 catcgctgca tntgaagaca ggcttggggg ggccattgca gctataaaca 200
 gcattcagca caacactcgn tccaatgtga ttttctacat tggtactctc 250
 aacaatacag cagaccatnt ccggtcctgg ntcaacagtg attccctgaa 300
 aagcatcaga tacaaaattg tcaattttga ccctaaactt ttggaaggaa 350

aagtaaagga ggatcctgac cagggggaat ccatgaaacc tttaaccttt 400
gcaaggttct acttgccaat tctggttccc agcgcaaaga aggccatata 450
catggatgat gatgtaattg tgcaaggtga tattcttgcc ctttacaata 500
cagcaactgaa gccaggacat gcagctgcat tttcagaaga ttgtgattca 550
gcctctacta aagttgtcat ccgtggagca ggaaa 585

<210> 173

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 173

cgacgctcta gcggttaccg ctgcgggctg gctgggctga gtggggctgc 50
gcggtgcca cgagactaga gggcaagtgt gctcgccca gcgtgcagg 100
aacgcgggcg gccagacaac gggctgggct ccggggcctg cggcgcgggc 150
gctgagctgg cagggcgggt cggggcgcg gctgcatccg catctcctcc 200
atcgcttga gtaaggcgcg ccgcggcgag cctttgaggg gaacgacttg 250
tcggagccct aaccaggggt gtctctgagc ctggtgggat ccccgagcg 300
tcacatcaact ttccgatcac ttcaaagtgg ttaaaaacta atatttatat 350
gacagaagaa aaagatgtca ttccgtaaag taaacatcat catcttggtc 400
ctgggctggt gctctcttct tactggtttt gcaccataac ttcctcagct 450
tgaggcagtt tgtaaggaa tgagggtaca gattcaggaa ttgtagggcc 500
tcaacctata ggactttgtc ccaaagtctc tccgacatgc agtagatggg 550
agacaagagg agattcctgt ggtcatcgct gcatctgaag acaggcttgg 600
gggggccatt gcagctataa acagcattca gcacaacact cgctccaatg 650
tgattttcta cattgttact ctcaacaata cagcagacca tctccggtcc 700
tgggctcaac agtgattccc tgaaaagcat cagatacaaa attgtcaatt 750
ttgaccctaa acttttggaa ggaaaagtaa aggaggatcc tgaccagggg 800
gaatccatga aacctttaac ctttgcaagg ttctacttgc caattctggg 850
ttcccagcgc aaagaaggcc atatacatgg atgatgatgt aattgtgcaa 900
ggtgatattc ttgcccttta caatacagca ctgaagccag gacatgcagc 950
tgcattttca gaagatttg attcagcctc tactaaagtt gtcacccgtg 1000
gagcaggaaa ccagtacaat tacattgggt atcttgacta taaaaaggaa 1050
agaattcgta agctttccat gaaagccagc acttgctcat ttaatcctgg 1100
agtttttgtt gcaaacctga cggaatggaa acgacagaat ataactaacc 1150
aactggaaaa atggatgaaa ctcaatgtag aagagggact gtatagcaga 1200

accctggctg gtagcatcac aacacctcct ctgcttatcg tattttatca 1250
acagcactct accatcgatc ctatgtggaa tgtccgccac cttgggtcca 1300
gtgctggaaa acgatattca cctcagtttg taaaggctgc caagttactc 1350
cattggaatg gacatttgaa gccatgggga aggactgctt catatactga 1400
tgtttgggga aaaatggtat attccagacc caacaggcaa attcaaccta 1450
atccgaagat ataccgagat ctcaaacata aagtgaaaca gaatttgaac 1500
tgtaagcaag cattttctcag gaagtccctgg aagatagcat gcgtgggaag 1550
taacagttgc taggcttcaa tgcctatogg tagcaagcca tggaaaaaga 1600
tgtgtcagct aggtaaagat gacaaactgc cctgtctggc agtcagcttc 1650
ccagacagac tatagactat aaatatgtct ccatctgcct taccaagtgt 1700
tttcttacta caatgctgaa tgactggaaa gaagaactga tatggctagt 1750
tcagctagct ggtacagata attcaaaact gctgttggtt ttaattttgt 1800
aacctgtggc ctgatctgta aataaaaactt acatttttca ataggtaaaa 1850
aaaaaaaaa aaaaaa 1866

<210> 174

<211> 823

<212> DNA

<213> Homo sapiens

<400> 174

ctgcaggtag acatctccac tgcccaggaa tcaactgagcg tgcagacagc 50
acagcctcct ctgaaggccg gccataccag agtcctgcct cggcatgggc 100
ctcaccattg aggcagctcc actgtctgtg ctggctctgag ggtgctgcct 150
gtcatggggg cagccatctc ccagggggcc ctcatcgcca tcgtctgcaa 200
cggctctctg ggtttcttgc tgctgctgct ctgggtcatc ctctgctggg 250
cctgccattc tcgtctgccc acgttgactc tctctctgaa tccagtccca 300
actccagccc tggcccctgt cctgagaagg cccaccacc ccagaagccc 350
agccatgaag gcagctacct gctgcagccc tgaaggcccc tggcctagcc 400
tggagcccag gacctaaagc cacctcacct agagcctgga attaggatcc 450
cagagttoag ccagcctggg gtccagaact caagagtccg cctgcttgga 500
gctggaccca gcggcccaga gtctagccag cttggctcca ataggagctc 550
agtggcccta aggagatggg cctgggggtg gggcttatga gttggtgcta 600
gagccagggc catctggact atgtctcatc ccaagggcca agggtcaggg 650
gccgggtcca ctctttccct aggctgagca cctctaggcc ctctaggttg 700
gggaagcaaa ctggaaccca tggcaataat aggaggggtgt ccaggctggg 750

ccccccccct ggtcctccca gtgtttgctg gataataaat ggaactatgg 800

ctctaaaaaaaa aaaaaaaaaaa aaa 823

<210> 175

<211> 87

<212> PRT

<213> Homo sapiens

<400> 175

Met	Gly	Ala	Ala	Ile	Ser	Gln	Gly	Ala	Leu	Ile	Ala	Ile	Val	Cys
1				5					10					15

Asn	Gly	Leu	Val	Gly	Phe	Leu	Leu	Leu	Leu	Leu	Trp	Val	Ile	Leu
				20					25					30

Cys	Trp	Ala	Cys	His	Ser	Arg	Leu	Pro	Thr	Leu	Thr	Leu	Ser	Leu
				35					40					45

Asn	Pro	Val	Pro	Thr	Pro	Ala	Leu	Ala	Pro	Val	Leu	Arg	Arg	Pro
				50					55					60

His	His	Pro	Arg	Ser	Pro	Ala	Met	Lys	Ala	Ala	Thr	Cys	Cys	Ser
				65					70					75

Pro	Glu	Gly	Pro	Trp	Pro	Ser	Leu	Glu	Pro	Arg	Thr
				80					85		

<210> 176

<211> 1660

<212> DNA

<213> Homo sapiens

<400> 176

gtttgaattc cttcaactat acccacagtc caaaagcaga ctcaactgtgt 50

cccaggctac cagttcctcc aagcaagtca tttcccttat ttaaccgatg 100

tgtccctcaa acacctgagt gctactccct atttgcatct gttttgataa 150

atgatgttga caccctccac cgaattctaa gtggaatcat gtcgggaaga 200

gatacaatcc ttggcctgtg taccctcgca ttagccttgt ctttgccat 250

gatgtttacc ttcagattca taccaccct tctggttcac attttcattt 300

cattggttat tttgggattg ttgtttgtct gcggtgtttt atggtggctg 350

tattatgact ataccaacga cctcagcata gaattggaca cagaaaggga 400

aaatatgaag tgcgtgctgg gggtttgctat cgtatccaca ggcacacgg 450

cagtgtgtct cgtcttgatt tttgtttctca gaaagagaat aaaattgaca 500

gttgagcttt tccaaatcac aaataaagcc atcagcagtg ctcccttcct 550

gctgttccag ccactgtgga catttgccat cctcattttc ttctgggtcc 600

tctgggtggc tgtgtgtgtg agcctgggaa ctgcaggagc tgcccagggt 650

atggaaggcg gccaaagtga atataagccc ctttcgggca ttcggtacat 700

gtgggtgtac catttaattg gcctcatctg gactagtga ttcaccttg 750

cgtgccagca aatgactata gctggggcag tggttacttg ttatttcaac 800
 agaagtaaaa atgatcctcc tgatcatccc atcctttcgt ctctctccat 850
 tctcttcttc taccatcaag gaaccgttgt gaaaggggtca tttttaatct 900
 ctgtggtgag gattccgaga atcattgtca tgtacatgca aaacgcactg 950
 aaagaacagc agcatgggtgc attgtccagg tacctgttcc gatgctgcta 1000
 ctgctgtttc tgggtgtcttg acaataacct gctccatctc aaccagaatg 1050
 catatactac aactgctatt aatgggacag atttctgtac atcagcaaaa 1100
 gatgcattca aaatcttgtc caagaactca agtcacttta catctattaa 1150
 ctgcttttga gacttcataa tttttctagg aaaggtgtta gtggtgtgtt 1200
 tcaactgtttt tggaggactc atggctttta actacaatcg ggcattccag 1250
 gtgtgggcag tccctctgtt attggtagct ttttttgcct acttagtagc 1300
 ccatagtttt ttatctgtgt ttgaaactgt gctggatgca cttttcctgt 1350
 gttttgctgt tgatctggaa acaaatgatg gatcgtcaga aaagccctac 1400
 tttatggatc aagaatttct gagtttcgta aaaaggagca acaaattaaa 1450
 caatgcaagg gcacagcagg acaagcactc attaaggaat gaggagggaa 1500
 cagaactcca ggccattgtg agatagatac ccatttaggt atctgtacct 1550
 ggaaaacatt tccttctaag agccatttac agaatagaag atgagaccac 1600
 tagagaaaag ttagtgaatt tttttttaa agacctaata aaccctattc 1650
 ttcctcaaaa 1660

<210> 177

<211> 445

<212> PRT

<213> Homo sapiens

<400> 177

Met	Ser	Gly	Arg	Asp	Thr	Ile	Leu	Gly	Leu	Cys	Ile	Leu	Ala	Leu
1				5					10					15

Ala	Leu	Ser	Leu	Ala	Met	Met	Phe	Thr	Phe	Arg	Phe	Ile	Thr	Thr
				20					25					30

Leu	Leu	Val	His	Ile	Phe	Ile	Ser	Leu	Val	Ile	Leu	Gly	Leu	Leu
				35					40					45

Phe	Val	Cys	Gly	Val	Leu	Trp	Trp	Leu	Tyr	Tyr	Asp	Tyr	Thr	Asn
				50					55					60

Asp	Leu	Ser	Ile	Glu	Leu	Asp	Thr	Glu	Arg	Glu	Asn	Met	Lys	Cys
				65					70					75

Val	Leu	Gly	Phe	Ala	Ile	Val	Ser	Thr	Gly	Ile	Thr	Ala	Val	Leu
				80					85					90

Leu	Val	Leu	Ile	Phe	Val	Leu	Arg	Lys	Arg	Ile	Lys	Leu	Thr	Val
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

410	415	420
Asn Asn Ala Arg	Ala Gln Gln Asp Lys His Ser Leu Arg Asn Glu	
425	430	435
Glu Gly Thr Glu Leu Gln Ala Ile Val Arg		
440	445	

<210> 178

<211> 2773

<212> DNA

<213> Homo sapiens

<400> 178

```

gttcgattag ctcctctgag aagaagagaa aagggttcttg gacctctccc 50
tgtttcttcc ttagaataat ttgtatggga tttgtgatgc aggaaagcct 100
aagggaaaaa gaatattcat tctgtgtggt gaaaattttt tgaaaaaaa 150
attgccttct tcaaacaagg gtgtcattct gatatttatg aggactgttg 200
ttctcactat gaaggcatct gttattgaaa tgttcottgt tttgctggtg 250
actggagtac attcaaacaa agaaacggca aagaagatta aaaggcccaa 300
gttcactgtg cctcagatca actgcgatgt caaagccgga aagatcatcg 350
atcctgagtt cattgtgaaa tgtccagcag gatgccaaaga ccccaaatac 400
catgtttatg gcactgacgt gtatgcatcc tactccagtg tgtgtggcgc 450
tgccgtacac agtgggtgtg ttgataattc aggagggaaa atacttgttc 500
ggaagggttg tggacagtct ggttacaaag ggagttattc caacggtgtc 550
caatcgttat ccctaccacg atggagagaa tcctttatog tcttagaaag 600
taaaccctaa aagggtgtaa cctaccatc agctcttaca tactcatcat 650
cgaaaagtcc agctgccccg gcaggtgaga ccacaaaagc ctatcagagg 700
ccacctattc cagggacaac tgcacagccg gtcactctga tgcagcttct 750
ggctgtcact gtagctgtgg ccacccccac caccttgcca aggccatccc 800
cttctgctgc ttctaccacc agcatcccca gaccacaatc agtgggccac 850
aggagccagg agatggatct ctggtccact gccacctaca caagcagcca 900
aaacaggccc agagctgatc caggtatcca aaggcaagat ccttcaggag 950
ctgccttcca gaaacctgtt ggagcggatg tcagcctggg acttgttcca 1000
aaagaagaat tgagcacaca gtctttggag ccagtatccc tgggagatcc 1050
aaactgcaaa attgacttgt cgtttttaat tgatgggagc accagcattg 1100
gcaaacggcg attccgaatc cagaagcagc tcctggctga tgttgoccaa 1150
gctcttgaca ttggccctgc cgtccactg atgggtgttg tccagtatgg 1200
agacaaccct gctactcact ttaacctcaa gacacacag aattctogag 1250

```

atctgaagac agccatagag aaaattactc agagaggagg acttttctaata 1300
 gtaggtcggg ccatctcctt tgtgaccaag aacttctttt ccaaagccaa 1350
 tggaacaga agcggggctc ccaatgtggt ggtggtgatg gtggatggct 1400
 ggcccacgga caaagtggag gaggttcaa gacttgcgag agagtcagga 1450
 atcaacattt tcttcacac cattgaaggt gctgctgaaa atgagaagca 1500
 gtatgtggtg gagcccaact ttgcaaaaaa ggccgtgtgc agaacaaacg 1550
 gcttctactc gctccacgtg cagagctggt ttggcctcca caagaccctg 1600
 cagcctctgg tgaagcgggt ctgcgacact gaccgcctgg cctgcagcaa 1650
 gacctgctt aactcggctg acattggctt cgtcatcgac ggctccagca 1700
 gtgtggggac gggcaacttc cgcaccgtcc tccagtttgt gaccaacctc 1750
 accaaagagt ttgagatttc cgacacggac acgcgcctcg gggccgtgca 1800
 gtacacctac gaacagcggc tggagtgttg gttcgacaag tacagcagca 1850
 agcctgacat cctcaacgcc atcaagaggg tgggctactg gagtgggtggc 1900
 accagcacgg gggctgccat caacttcgcc ctggagcagc tcttcaagaa 1950
 gtccaagccc aacaagagga agttaatgat cctcatcacc gacgggaggt 2000
 cctacgacga cgtccggatc ccagccatgg ctgccatct gaagggagtg 2050
 atcacctatg cgataggcgt tgcctgggct gcccaagagg agctagaagt 2100
 cattgccact caccgcgcca gagaccactc cttcttttgt gacgagtttg 2150
 acaacctcca tcagtatgtc cccaggatca tccagaacat ttgtacagag 2200
 ttcaactcac agcctcgaa ctgaattcag agcaggcaga gcaccagcaa 2250
 gtgctgcttt actaactgac gtgttgacc accccaccgc ttaatggggc 2300
 acgcacggtg catcaagtct tgggcagggc atggagaaac aaatgtcttg 2350
 ttattattct ttgccatcat gctttttcat attccaaaac ttggagttac 2400
 aaagatgatc acaaacgtat agaatgagcc aaaaggctac atcatgttga 2450
 ggggtgctgga gattttacat tttgacaatt gttttcaaaa taaatgttcg 2500
 gaatacagtg cagcccttac gacaggctta cgtagagctt ttgtgagatt 2550
 ttttaagttg tatttctgat ttgaactctg taaccctcag caagtttcat 2600
 ttttgtcatg acaatgtagg aattgctgaa ttaaattgtt agaaggatga 2650
 aaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2700
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
 aaaaaaaaaa aaaaaaaaaa aag 2773

<210> 179

<211> 678
 <212> PRT
 <213> Homo sapiens

<400> 179

Met	Arg	Thr	Val	Val	Leu	Thr	Met	Lys	Ala	Ser	Val	Ile	Glu	Met
1				5					10					15
Phe	Leu	Val	Leu	Leu	Val	Thr	Gly	Val	His	Ser	Asn	Lys	Glu	Thr
			20						25					30
Ala	Lys	Lys	Ile	Lys	Arg	Pro	Lys	Phe	Thr	Val	Pro	Gln	Ile	Asn
			35						40					45
Cys	Asp	Val	Lys	Ala	Gly	Lys	Ile	Ile	Asp	Pro	Glu	Phe	Ile	Val
			50						55					60
Lys	Cys	Pro	Ala	Gly	Cys	Gln	Asp	Pro	Lys	Tyr	His	Val	Tyr	Gly
			65						70					75
Thr	Asp	Val	Tyr	Ala	Ser	Tyr	Ser	Ser	Val	Cys	Gly	Ala	Ala	Val
			80						85					90
His	Ser	Gly	Val	Leu	Asp	Asn	Ser	Gly	Gly	Lys	Ile	Leu	Val	Arg
			95						100					105
Lys	Val	Ala	Gly	Gln	Ser	Gly	Tyr	Lys	Gly	Ser	Tyr	Ser	Asn	Gly
			110						115					120
Val	Gln	Ser	Leu	Ser	Leu	Pro	Arg	Trp	Arg	Glu	Ser	Phe	Ile	Val
			125						130					135
Leu	Glu	Ser	Lys	Pro	Lys	Lys	Gly	Val	Thr	Tyr	Pro	Ser	Ala	Leu
			140						145					150
Thr	Tyr	Ser	Ser	Ser	Lys	Ser	Pro	Ala	Ala	Gln	Ala	Gly	Glu	Thr
			155						160					165
Thr	Lys	Ala	Tyr	Gln	Arg	Pro	Pro	Ile	Pro	Gly	Thr	Thr	Ala	Gln
			170						175					180
Pro	Val	Thr	Leu	Met	Gln	Leu	Leu	Ala	Val	Thr	Val	Ala	Val	Ala
			185						190					195
Thr	Pro	Thr	Thr	Leu	Pro	Arg	Pro	Ser	Pro	Ser	Ala	Ala	Ser	Thr
			200						205					210
Thr	Ser	Ile	Pro	Arg	Pro	Gln	Ser	Val	Gly	His	Arg	Ser	Gln	Glu
			215						220					225
Met	Asp	Leu	Trp	Ser	Thr	Ala	Thr	Tyr	Thr	Ser	Ser	Gln	Asn	Arg
			230						235					240
Pro	Arg	Ala	Asp	Pro	Gly	Ile	Gln	Arg	Gln	Asp	Pro	Ser	Gly	Ala
			245						250					255
Ala	Phe	Gln	Lys	Pro	Val	Gly	Ala	Asp	Val	Ser	Leu	Gly	Leu	Val
			260						265					270
Pro	Lys	Glu	Glu	Leu	Ser	Thr	Gln	Ser	Leu	Glu	Pro	Val	Ser	Leu
			275						280					285
Gly	Asp	Pro	Asn	Cys	Lys	Ile	Asp	Leu	Ser	Phe	Leu	Ile	Asp	Gly

	605		610		615
Ala His Leu Lys Gly Val Ile Thr Tyr	Ala Ile Gly Val Ala Trp				
620	625	630			
Ala Ala Gln Glu Glu Leu Glu Val Ile	Ala Thr His Pro Ala Arg				
635	640	645			
Asp His Ser Phe Phe Val Asp Glu Phe	Asp Asn Leu His Gln Tyr				
650	655	660			
Val Pro Arg Ile Ile Gln Asn Ile Cys	Thr Glu Phe Asn Ser Gln				
665	670	675			

Pro Arg Asn

<210> 180
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 180
 caggatgaac tgggtgcagt ggctgctgct gctgcggggg cgctgagagg 50
 acacgagctc tatgcctttc cggtcgtcga tcccgtcgg cctcctgtgc 100
 gcgctgctgc ctacgacca tgggtgcgcca ggtcccgcag gctccgcgcc 150
 agatcccgcc cactacagtt tttctctgac tctaattgat gcactggaca 200
 ccttgctgat tttggggaat gtctcagaat tccaaagagt ggttgaagtg 250
 ctccaggaca gcgtggactt tgatattgat gtgaacgcct ctgtgtttga 300
 aacaaacatt cgagtggtag gaggactcct gtctgctcat ctgctctcca 350
 agaaggctgg ggtggaagta gaggctggat ggccctgttc cgggcctctc 400
 ctgagaatgg ctgaggaggc ggcccgaaaa ctctcccag cttttcagac 450
 cccactggc atgcatatg gaacagtga cttacttcat ggctgaacc 500
 caggagagac ccctgtcacc tgtacggcag ggattgggac cttcattgtt 550
 gaatttgcca ccctgagcag cctcactggt gaccgggtgt tcgaagatgt 600
 ggccagagtg gctttgatgc gcctctggga gagccggtca gatatcgggc 650
 tggtcggcaa ccacattgat gtgctcactg gcaagtgggt ggcccaggac 700
 gcaggcatcg gggtggcgt ggactcctac tttgagtact tggtgaaagg 750
 agccatcctg cttcaggata agaagctcat ggccatgttc ctagagtata 800
 acaaagccat ccggaactac acccgcttcg atgactggta cctgtggggt 850
 cagatgtaca aggggactgt gtccatgcca gtcttcagc cttggaggc 900
 ctactggcct ggtcttcaga gcctcattgg agacattgac aatgccatga 950
 ggaccttcct caactactac actgtatgga agcagtttgg ggggctccc 1000

gaattctaca acattcctca gggatacaca gtggagaagc gagagggcta 1050
 cccacttcgg ccagaactta ttgaaagcgc aatgtacctc taccgtgcca 1100
 cgggggatcc caccctccta gaactcggaa gagatgctgt ggaatccatt 1150
 gaaaaaatca gcaaggtgga gtgcggtattt gcaacaatca aagatctgcy 1200
 agaccacaag ctggacaacc gcatggagtc gttcttcctg gccgagactg 1250
 tgaaatacct ctacctcctg tttgacccaa ccaacttcat ccacaacaat 1300
 ggggtccacct tcgacgcggt gatcaccccc tatggggagt gcatcctggg 1350
 ggctgggggg tacatcttca acacagaagc tcaccccatc gaccttgccg 1400
 ccctgcactg ctgccagagg ctgaaggaag agcagtggga ggtggaggac 1450
 ttgatgaggg aattctactc tctcaaacgg agcaggtcga aatttcagaa 1500
 aaacactgtt agttcggggc catgggaacc tccagcaagg ccaggaacac 1550
 tcttctcacc agaaaacat gaccaggcaa gggagaggaa gcctgccaaa 1600
 cagaaggtcc cacttctcag ctgccccagt cagcccttca cctccaagtt 1650
 ggcattactg ggacaggttt tcctagactc ctcataacca ctggataatt 1700
 tttttatttt tatttttttg aggctaaact ataataaatt gcttttggct 1750
 atcataaaa 1759

<210> 181

<211> 541

<212> PRT

<213> Homo sapiens

<400> 181

Met	Pro	Phe	Arg	Leu	Leu	Ile	Pro	Leu	Gly	Leu	Leu	Cys	Ala	Leu
1				5					10					15
Leu	Pro	Gln	His	His	Gly	Ala	Pro	Gly	Pro	Asp	Gly	Ser	Ala	Pro
			20						25					30
Asp	Pro	Ala	His	Tyr	Ser	Phe	Ser	Leu	Thr	Leu	Ile	Asp	Ala	Leu
			35						40					45
Asp	Thr	Leu	Leu	Ile	Leu	Gly	Asn	Val	Ser	Glu	Phe	Gln	Arg	Val
			50						55					60
Val	Glu	Val	Leu	Gln	Asp	Ser	Val	Asp	Phe	Asp	Ile	Asp	Val	Asn
			65						70					75
Ala	Ser	Val	Phe	Glu	Thr	Asn	Ile	Arg	Val	Val	Gly	Gly	Leu	Leu
			80						85					90
Ser	Ala	His	Leu	Leu	Ser	Lys	Lys	Ala	Gly	Val	Glu	Val	Glu	Ala
			95						100					105
Gly	Trp	Pro	Cys	Ser	Gly	Pro	Leu	Leu	Arg	Met	Ala	Glu	Glu	Ala
			110						115					120
Ala	Arg	Lys	Leu	Leu	Pro	Ala	Phe	Gln	Thr	Pro	Thr	Gly	Met	Pro

	440		445		450
Cys Gln Arg Leu	Lys Glu Glu Gln Trp	Glu Val Glu Asp Leu	Met		
	455	460	465		
Arg Glu Phe Tyr	Ser Leu Lys Arg Ser	Arg Ser Lys Phe Gln	Lys		
	470	475	480		
Asn Thr Val Ser	Ser Gly Pro Trp Glu	Pro Pro Ala Arg Pro	Gly		
	485	490	495		
Thr Leu Phe Ser	Pro Glu Asn His Asp	Gln Ala Arg Glu Arg	Lys		
	500	505	510		
Pro Ala Lys Gln	Lys Val Pro Leu Leu	Ser Cys Pro Ser Gln	Pro		
	515	520	525		
Phe Thr Ser Lys	Leu Ala Leu Leu Gly	Gln Val Phe Leu Asp	Ser		
	530	535	540		

Ser

<210> 182
 <211> 2056
 <212> DNA
 <213> Homo sapiens

<400> 182
 aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50
 catctgggtt tgggcagaaa ggaggggtgct tcggagcccg ccctttctga 100
 gcttcctggg ccggtcttag aacaattcag gcttcgctgc gactcagacc 150
 tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200
 gctttatttt ggaaagaaac aatgttctag gtcaaactga gtctaccaa 250
 tgcagacttt cacaatggtt ctagaagaaa tctggacaag tcttttcatg 300
 tggtttttct acgcattgat tccatgtttg ctcacagatg aagtggccat 350
 tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400
 tcttgatgtg gagcccagtg atcgcgctg gagaaacagt gtactattct 450
 gtcgaatacc aggggggagta cgagagcctg tacacgagcc acatctggat 500
 cccagcagc tgggtgtcac tcaactgaagg tcctgagtgt gatgtcactg 550
 atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600
 ggctcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650
 ctcaaccatc cttaccogac ctgggatgga gatcaccaa gatggcttcc 700
 acctggttat tgagctggag gacctggggc ccagtttgga gttccttgtg 750
 gcctactgga ggagggagcc tggtgccgag gaacatgtca aaatggtgag 800
 gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850

actgtgtgaa ggcccagaca ttctgtgaagg ccattgggag gtacagcgcc 900
 ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca ttcccctggt 950
 actggccctg tttgcctttg ttggcttcat gctgacctt gtggtcgtgc 1000
 cactgttcgt ctggaaaatg ggccggctgc tccagtactc ctggtgcccc 1050
 gtggtggtcc tcccagacac cttgaaaata accaattcac cccagaagtt 1100
 aatcagctgc agaaggagg aggtggatgc ctgtgccacg gctgtgatgt 1150
 ctctgagga actcctcagg gcctggatct cataggtttg cggaagggcc 1200
 caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250
 aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300
 gagcctgttg tctacaagtc tagaagcaac catcagaggc aggggtggtt 1350
 gtctaacaga aactgactg aggccttaggg gatgtgacct ctagactggg 1400
 ggctgccact tgctggctga gcaacctgg gaaaagtgc ttcacccctt 1450
 cggtcctaag ttttctcatc tgtaatgggg gaattaccta cacacctgct 1500
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550
 tacaccagc acttgcaagg ctagagggaa actggtgaca ctctacagtc 1600
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650
 gatcaaggac tctacacact gggtggttg gagagccac tttcccagaa 1700
 taatccttga gagaaaagga atcatgggag caatggtgtt gagttcactt 1750
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950
 gtaacatgtg catgtttgtt gtgctccttt tttctgttgg taaagtacag 2000
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050
 aaaaaa 2056

<210> 183

<211> 311

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-29

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 40-43, 134-137

<223> N-glycosylation sites.

<220>

<221> Tissue factor proteins homology

<222> 92-119

<223> Tissue factor proteins homology

<220>

<221> Transmembrane domain

<222> 230-255

<223> Transmembrane domain

<220>

<221> Integrins alpha chain protein homology

<222> 232-262

<223> Integrins alpha chain protein homology

<400> 183

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu
1				5					10					15
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
				20					25					30
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
				35					40					45
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro
				50					55					60
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu
				65					70					75
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser
				80					85					90
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala
				95					100					105
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
				110					115					120
Thr	Ser	Ala	Trp	Ser	Ile	Leu	Lys	His	Pro	Phe	Asn	Arg	Asn	Ser
				125					130					135
Thr	Ile	Leu	Thr	Arg	Pro	Gly	Met	Glu	Ile	Thr	Lys	Asp	Gly	Phe
				140					145					150
His	Leu	Val	Ile	Glu	Leu	Glu	Asp	Leu	Gly	Pro	Gln	Phe	Glu	Phe
				155					160					165
Leu	Val	Ala	Tyr	Trp	Arg	Arg	Glu	Pro	Gly	Ala	Glu	Glu	His	Val
				170					175					180
Lys	Met	Val	Arg	Ser	Gly	Gly	Ile	Pro	Val	His	Leu	Glu	Thr	Met
				185					190					195
Glu	Pro	Gly	Ala	Ala	Tyr	Cys	Val	Lys	Ala	Gln	Thr	Phe	Val	Lys
				200					205					210
Ala	Ile	Gly	Arg	Tyr	Ser	Ala	Phe	Ser	Gln	Thr	Glu	Cys	Val	Glu
				215					220					225

Val	Gln	Gly	Glu	Ala	Ile	Pro	Leu	Val	Leu	Ala	Leu	Phe	Ala	Phe	230	235	240
Val	Gly	Phe	Met	Leu	Ile	Leu	Val	Val	Val	Pro	Leu	Phe	Val	Trp	245	250	255
Lys	Met	Gly	Arg	Leu	Leu	Gln	Tyr	Ser	Cys	Cys	Pro	Val	Val	Val	260	265	270
Leu	Pro	Asp	Thr	Leu	Lys	Ile	Thr	Asn	Ser	Pro	Gln	Lys	Leu	Ile	275	280	285
Ser	Cys	Arg	Arg	Glu	Glu	Val	Asp	Ala	Cys	Ala	Thr	Ala	Val	Met	290	295	300
Ser	Pro	Glu	Glu	Leu	Leu	Arg	Ala	Trp	Ile	Ser					305	310	

<210> 184
 <211> 808
 <212> DNA
 <213> Homo sapiens

<220>
 <221> unsure
 <222> 654, 711, 748
 <223> unknown base

<400> 184
 tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50
 cctttctagc ttctggccg gctctagaac aattcaggct tcgctgcgac 100
 tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150
 agaatgcttt attttgaaa gaaacaatgt tctaggtcaa actgagtcta 200
 ccaaatgcag actttcacia tggttctaga agaaatctgg acaagtcttt 250
 tcatgtggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350
 gcatctcttg atgtggagcc cagtgatcgc gcttgagaaa acagtgtact 400
 attctgtcga ataccagggg gagtacgaga gctgtacac gagccacatc 450
 tggatcccca gcagctggtg ctcaactcact gaaggctctg agtgtgatgt 500
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggccca 550
 cattgggctc acagacctca gcttgagca tctgaagca tccctttaat 600
 agaaactcaa ccattccttac ccgacctggg atggagatca ccaaagatgg 650
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750
 gaacctcttg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800
 tgaccac 808

<210> 185
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 185
aggcttcgct gcgactagac ctc 23

<210> 186
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 186
ccaggtcggg taaggatggt tgag 24

<210> 187
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 187
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 188
<211> 1227
<212> DNA
<213> Homo sapiens

<400> 188
cggacgcgtg ggccgccacc tccggaacaa gccatggtgg cggcgacggt 50
ggcagcggcg tggctgctcc tgtgggctgc ggctgcgcg cagcaggagc 100
aggacttcta cgacttcaag gcggtcaaca tccggggcaa actggtgtcg 150
ctggagaagt accgcggatc ggtgtccctg gtggtgaatg tggccagcga 200
gtgcggcttc acagaccagc actaccgagc cctgcagcag ctgcagcgag 250
acctgggccc ccaccacttt aacgtgctcg ccttcccctg caaccagttt 300
ggccaacagg agcctgacag caacaaggag attgagagct ttgcccgcg 350
cacctacagt gtctcattcc ccatgtttag caagattgca gtcaccggtg 400
ctggtgcccc tcttgccttc aagtacctgg cccagacttc tgggaaggag 450
cccacctgga acttctggaa gtacctagta gcccagatg gaaaggtggt 500
aggggcttgg gacccaactg tgtcagtgga ggaggtcaga ccccagatca 550
cagcgctcgt gaggaagctc atcctactga agcgagaaga cttataacca 600

ccgcgtctcc tcctccacca cctcatcccg cccacctgtg tggggctgac 650
 caatgcaaac tcaaatgggtg cttcaaaggg agagaccac tgactctoct 700
 tcctttactc ttatgccatt ggtcccatca ttcttgtggg ggaaaaattc 750
 tagtattttg attatttgaa tcttacagca acaaatagga actcctggcc 800
 aatgagagct cttgaccagt gaatcaccag ccgatacgaa cgtcttgcca 850
 acaaaaatgt gtggcaaata gaagtatatc aagcaataat ctcccaccca 900
 aggcttctgt aaactgggac caatgattac ctcatagggc tgttgtgagg 950
 attaggatga aatacctgtg aaagtgccta ggcagtgccg gccaaatagg 1000
 aggcattcaa tgaacatttt ttgcatataa accaaaaaat aacttgttat 1050
 caataaaaac ttgcatccaa catgaatttc cagccgatga taatccaggc 1100
 caaagggttta gttgttgta tttcctctgt attattttct tcattacaaa 1150
 agaaatgcaa gttcattgta acaatccaaa caatacctca cgatataaaa 1200
 taaaaatgaa agtatcctcc tcaaaaaa 1227

<210> 189

<211> 187

<212> PRT

<213> Homo sapiens

<400> 189

Met	Val	Ala	Ala	Thr	Val	Ala	Ala	Ala	Trp	Leu	Leu	Leu	Trp	Ala	1	5	10	15
Ala	Ala	Cys	Ala	Gln	Gln	Glu	Gln	Asp	Phe	Tyr	Asp	Phe	Lys	Ala	20	25	30	
Val	Asn	Ile	Arg	Gly	Lys	Leu	Val	Ser	Leu	Glu	Lys	Tyr	Arg	Gly	35	40	45	
Ser	Val	Ser	Leu	Val	Val	Asn	Val	Ala	Ser	Glu	Cys	Gly	Phe	Thr	50	55	60	
Asp	Gln	His	Tyr	Arg	Ala	Leu	Gln	Gln	Leu	Gln	Arg	Asp	Leu	Gly	65	70	75	
Pro	His	His	Phe	Asn	Val	Leu	Ala	Phe	Pro	Cys	Asn	Gln	Phe	Gly	80	85	90	
Gln	Gln	Glu	Pro	Asp	Ser	Asn	Lys	Glu	Ile	Glu	Ser	Phe	Ala	Arg	95	100	105	
Arg	Thr	Tyr	Ser	Val	Ser	Phe	Pro	Met	Phe	Ser	Lys	Ile	Ala	Val	110	115	120	
Thr	Gly	Thr	Gly	Ala	His	Pro	Ala	Phe	Lys	Tyr	Leu	Ala	Gln	Thr	125	130	135	
Ser	Gly	Lys	Glu	Pro	Thr	Trp	Asn	Phe	Trp	Lys	Tyr	Leu	Val	Ala	140	145	150	
Pro	Asp	Gly	Lys	Val	Val	Gly	Ala	Trp	Asp	Pro	Thr	Val	Ser	Val				

	155	160	165
Glu Glu Val Arg	Pro Gln Ile Thr Ala	Leu Val Arg Lys Leu	Ile
	170	175	180
Leu Leu Lys Arg	Glu Asp Leu		
	185		

<210> 190
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 190
 gcaggacttc tacgacttca aggc 24

<210> 191
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 191
 agtctgggcc aggtacttga aggc 24

<210> 192
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 192
 caacatccgg ggcaaactgg tgctgctgga gaagtaccgc ggatcggtgt 50

<210> 193
 <211> 2187
 <212> DNA
 <213> Homo sapiens

<400> 193
 cggacgcgtg ggcgggccgg gacgcagggc aaagcgagcc atggctgtct 50
 acgtcgggat gctgcgcctg gggaggctgt gcgccgggag ctcggggggtg 100
 ctggggggccc gggccgccct ctctcgaggt tggcaggaag ccaggttgca 150
 ggggtgtccgc ttctcagtt ccagagaggt ggatcgcatg gtctccacgc 200
 ccatcggagg cctcagctac gttcaggggt gcaccaaaaa gcatcttaac 250
 agcaagactg tgggccagtg cctggagacc acagcacaga ggggtcccaga 300
 acgagaggcc ttggtcgtcc tccatgaaga cgtcaggttg acctttgccc 350
 aactcaagga ggaggtggac aaagctgctt ctggcctcct gagcattggc 400

ctctgcaaag gtgaccggct gggcatgtgg ggacctaact cctatgcatg 450
 ggtgctcatg cagttggcca ccgcccaggc gggcatcatt ctggtgtctg 500
 tgaaccacgc ctaccaggct atggaactgg agtatgtcct caagaagggtg 550
 ggctgcaagg cccttgtgtt cccaagcaa ttcaagacc agcaatacta 600
 caacgtcctg aagcagatct gtccagaagt ggagaatgcc cagccagggg 650
 ccttgaagag tcagaggctc ccagatctga ccacagtcac ctcggtggat 700
 gcccctttgc cggggaccct gctcctggat gaagtgggtg cggctggcag 750
 cacacggcag catctggacc agctccaata caaccagcag ttcctgtcct 800
 gccatgaccc catcaacatc cagttcacct cggggacaac aggcagcccc 850
 aagggggcca ccctctccca ctacaacatt gtcaacaact ccaacatttt 900
 aggagagcgc ctgaaactgc atgagaagac accagagcag ttgcggatga 950
 tcctgcccac cccctgtac cattgcctgg gttccgtggc aggcacaatg 1000
 atgtgtctga tgtacgggtg caccctcatc ctggcctctc ccatcttcaa 1050
 tggcaagaag gcactggagg ccatcagcag agagagaggc accttcctgt 1100
 atggtacccc cacgatgttc gtggacattc tgaaccagcc agacttctcc 1150
 agttatgaca tctcgaccat gtgtggaggt gtcattgctg ggtccctgc 1200
 acctccagag ttgatccgag ccatcatcaa caagataaat atgaaggacc 1250
 tgggtggttc ttatggaacc acagagaaca gtcccgtgac attcgcgcac 1300
 ttccctgagg aactgtgga gcagaaggca gaaagcgtgg gcagaattat 1350
 gcctcacacg gagggccgga tcatgaacat ggaggcaggg acgctggcaa 1400
 agctgaacac gcccggggag ctgtgcatcc gaggggtactg cgtcatgctg 1450
 ggctactggg gtgagcctca gaagacagag gaagcagtgg atcaggacaa 1500
 gtggtattgg acaggagatg tcgccacaat gaatgagcag ggcttctgca 1550
 agatcgtggg ccgctctaag gatatgatca tccgggggtg tgagaacatc 1600
 taccocgcag agctcgagga cttctttcac acacaccga aggtgcagga 1650
 agtgcagggtg gtgggagtga aggacgatcg gatgggggaa gagatttgtg 1700
 cctgcattcg gctgaaggac ggggaggaga ccacggtgga ggagataaaa 1750
 gctttctgca aagggaagat ctctcacttc aagattccga agtacatcgt 1800
 gtttgtcaca aactaccccc tcaccatttc aggaaagatc cagaaattca 1850
 aacttcgaga gcagatggaa cgacatctaa atctgtgaat aaagcagcag 1900
 gcctgtcctg gccggttggc ttgactctct cctgtcagaa tgcaacctgg 1950
 ctttatgcac ctagatgtcc ccagcaccca gttctgagcc aggcacatca 2000

aatgtcaagg aattgactga acgaactaag agctcctgga tgggtccggg 2050
aactgccttg ggcacaaggt gccaaaaggc aggcagcctg cccaggccct 2100
ccctcctgtc catccccac attcccctgt ctgtccttgt gatttggcat 2150
aaagagcttc tgttttcttt gaaaaaaaaa aaaaaaa 2187

<210> 194

<211> 615

<212> PRT

<213> Homo sapiens

<400> 194

Met	Ala	Val	Tyr	Val	Gly	Met	Leu	Arg	Leu	Gly	Arg	Leu	Cys	Ala	1	5	10	15
Gly	Ser	Ser	Gly	Val	Leu	Gly	Ala	Arg	Ala	Ala	Leu	Ser	Arg	Ser	20	25	30	
Trp	Gln	Glu	Ala	Arg	Leu	Gln	Gly	Val	Arg	Phe	Leu	Ser	Ser	Arg	35	40	45	
Glu	Val	Asp	Arg	Met	Val	Ser	Thr	Pro	Ile	Gly	Gly	Leu	Ser	Tyr	50	55	60	
Val	Gln	Gly	Cys	Thr	Lys	Lys	His	Leu	Asn	Ser	Lys	Thr	Val	Gly	65	70	75	
Gln	Cys	Leu	Glu	Thr	Thr	Ala	Gln	Arg	Val	Pro	Glu	Arg	Glu	Ala	80	85	90	
Leu	Val	Val	Leu	His	Glu	Asp	Val	Arg	Leu	Thr	Phe	Ala	Gln	Leu	95	100	105	
Lys	Glu	Glu	Val	Asp	Lys	Ala	Ala	Ser	Gly	Leu	Leu	Ser	Ile	Gly	110	115	120	
Leu	Cys	Lys	Gly	Asp	Arg	Leu	Gly	Met	Trp	Gly	Pro	Asn	Ser	Tyr	125	130	135	
Ala	Trp	Val	Leu	Met	Gln	Leu	Ala	Thr	Ala	Gln	Ala	Gly	Ile	Ile	140	145	150	
Leu	Val	Ser	Val	Asn	Pro	Ala	Tyr	Gln	Ala	Met	Glu	Leu	Glu	Tyr	155	160	165	
Val	Leu	Lys	Lys	Val	Gly	Cys	Lys	Ala	Leu	Val	Phe	Pro	Lys	Gln	170	175	180	
Phe	Lys	Thr	Gln	Gln	Tyr	Tyr	Asn	Val	Leu	Lys	Gln	Ile	Cys	Pro	185	190	195	
Glu	Val	Glu	Asn	Ala	Gln	Pro	Gly	Ala	Leu	Lys	Ser	Gln	Arg	Leu	200	205	210	
Pro	Asp	Leu	Thr	Thr	Val	Ile	Ser	Val	Asp	Ala	Pro	Leu	Pro	Gly	215	220	225	
Thr	Leu	Leu	Leu	Asp	Glu	Val	Val	Ala	Ala	Gly	Ser	Thr	Arg	Gln	230	235	240	
His	Leu	Asp	Gln	Leu	Gln	Tyr	Asn	Gln	Gln	Phe	Leu	Ser	Cys	His				

				245					250					255	
Asp	Pro	Ile	Asn	Ile 260	Gln	Phe	Thr	Ser	Gly 265	Thr	Thr	Gly	Ser	Pro 270	
Lys	Gly	Ala	Thr	Leu 275	Ser	His	Tyr	Asn	Ile 280	Val	Asn	Asn	Ser	Asn 285	
Ile	Leu	Gly	Glu	Arg 290	Leu	Lys	Leu	His	Glu 295	Lys	Thr	Pro	Glu	Gln 300	
Leu	Arg	Met	Ile	Leu 305	Pro	Asn	Pro	Leu	Tyr 310	His	Cys	Leu	Gly	Ser 315	
Val	Ala	Gly	Thr	Met 320	Met	Cys	Leu	Met	Tyr 325	Gly	Ala	Thr	Leu	Ile 330	
Leu	Ala	Ser	Pro	Ile 335	Phe	Asn	Gly	Lys	Lys 340	Ala	Leu	Glu	Ala	Ile 345	
Ser	Arg	Glu	Arg	Gly 350	Thr	Phe	Leu	Tyr	Gly 355	Thr	Pro	Thr	Met	Phe 360	
Val	Asp	Ile	Leu	Asn 365	Gln	Pro	Asp	Phe	Ser 370	Ser	Tyr	Asp	Ile	Ser 375	
Thr	Met	Cys	Gly	Gly 380	Val	Ile	Ala	Gly	Ser 385	Pro	Ala	Pro	Pro	Glu 390	
Leu	Ile	Arg	Ala	Ile 395	Ile	Asn	Lys	Ile	Asn 400	Met	Lys	Asp	Leu	Val 405	
Val	Ala	Tyr	Gly	Thr 410	Thr	Glu	Asn	Ser	Pro 415	Val	Thr	Phe	Ala	His 420	
Phe	Pro	Glu	Asp	Thr 425	Val	Glu	Gln	Lys	Ala 430	Glu	Ser	Val	Gly	Arg 435	
Ile	Met	Pro	His	Thr 440	Glu	Ala	Arg	Ile	Met 445	Asn	Met	Glu	Ala	Gly 450	
Thr	Leu	Ala	Lys	Leu 455	Asn	Thr	Pro	Gly	Glu 460	Leu	Cys	Ile	Arg	Gly 465	
Tyr	Cys	Val	Met	Leu 470	Gly	Tyr	Trp	Gly	Glu 475	Pro	Gln	Lys	Thr	Glu 480	
Glu	Ala	Val	Asp	Gln 485	Asp	Lys	Trp	Tyr	Trp 490	Thr	Gly	Asp	Val	Ala 495	
Thr	Met	Asn	Glu	Gln 500	Gly	Phe	Cys	Lys	Ile 505	Val	Gly	Arg	Ser	Lys 510	
Asp	Met	Ile	Ile	Arg 515	Gly	Gly	Glu	Asn	Ile 520	Tyr	Pro	Ala	Glu	Leu 525	
Glu	Asp	Phe	Phe	His 530	Thr	His	Pro	Lys	Val 535	Gln	Glu	Val	Gln	Val 540	
Val	Gly	Val	Lys	Asp 545	Asp	Arg	Met	Gly	Glu 550	Glu	Ile	Cys	Ala	Cys 555	
Ile	Arg	Leu	Lys	Asp	Gly	Glu	Glu	Thr	Thr	Val	Glu	Glu	Ile	Lys	

560	565	570
Ala Phe Cys Lys Gly Lys Ile Ser His Phe Lys Ile Pro Lys Tyr		
575	580	585
Ile Val Phe Val Thr Asn Tyr Pro Leu Thr Ile Ser Gly Lys Ile		
590	595	600
Gln Lys Phe Lys Leu Arg Glu Gln Met Glu Arg His Leu Asn Leu		
605	610	615

<210> 195
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 195
 caactccaac attttaggag agcgctgaa actgcatgag aagacaccag 50
 agcagttgcg gatgatcctg cccaaccccc tgtaccattg cctgggttcc 100
 gtggcaggca caatgatgtg tctgatgtac ggtgccaccc tcatcctggc 150
 ctctcccatc ttcaatggca agaaggcact ggaggccatc agcagagaga 200
 gaggcacctt cctgtatggt accccaacga tgttcgtgga cattctgaac 250
 cagccagact totccagtta tgacatctcg accatgtgtg gaggtgtcat 300
 tgctgggtcc cctgcacctc cagagttgat ccgagccatc atcaacaaga 350
 taaatatgaa ggacctggtg gttgcttatg gaaccacaga gaacagtccc 400
 gtgacattcg cgcacttccc tgaggacact gtggagcaga aggcagaaag 450
 cgtgggcaga attatgcctc aacaggaggc gcggatcatg aacatggagg 500
 cagggacgct ggcaaagctg aacacgcccg gggagctgtg catccgaggg 550
 tactgctca tgctgggcta ctgggggtgag cctcagaaga cagaggaagc 600
 agtggatcag gacaagtggg attggacagg agatgtcgcc ac 642

<210> 196
 <211> 1575
 <212> DNA
 <213> Homo sapiens

<400> 196
 gagcaggacg gagccatgga ccccgccagg aaagcaggtg cccaggccat 50
 gatctggact gcaggctggc tgctgctgct gctgcttcgc ggaggagcgc 100
 aggccctgga gtgctacagc tgcgtgcaga aagcagatga cggatgctcc 150
 ccgaacaaga tgaagacagt gaagtgcgcg ccgggctgtg acgtctgcac 200
 cgaggccgtg ggggctgtg agaccatcca cggacaattc tcgctggcag 250
 tgcgggggtt cggttcggga ctccccggca agaataccg cggcctggat 300
 ctacacgggc ttctggcgtt catccagctg cagcaatgcg ctcaggatcg 350

ctgcaacgcc aagctcaacc tcacctcgcg ggcgctcgac ccggcaggta 400
 atgagagtgc ataccgcgcc aacggcgtgg agtgctacag ctgtgtgggc 450
 ctgagccggg aggcgtgcc ggtacatcg ccgccggtcg tgagctgcta 500
 caacgccagc gatcatgtct acaagggtg cttcgacggc aacgtcacct 550
 tgacggcagc taatgtgact gtgtccttgc ctgtccgggg ctgtgtccag 600
 gatgaattct gcactcggga tggagtaaca ggcccagggt tcacgctcag 650
 tggctcctgt tgccaggggt cccgctgtaa ctctgacctc cgcaacaaga 700
 cctacttctc ccctogaatc ccaccccttg tccggctgcc ccctccagag 750
 cccacgactg tggcctcaac cacatctgtc accacttcta cctcgcccc 800
 agtgagaccc acatccacca ccaaaccat gccagcgcca accagtcaga 850
 ctccgagaca gggagtagaa cacgaggcct cccgggatga ggagcccagg 900
 ttgactggag gcgccgtgg ccaccaggac cgcagcaatt cagggcagta 950
 tcctgcaaaa ggggggcccc agcagcccca taataaaggc tgtgtggctc 1000
 ccacagctgg attggcagcc cttctgttgg ccgtggctgc tgggtgtcta 1050
 ctgtgagctt ctccacctgg aaatttccct ctcacctact tctctggccc 1100
 tgggtacccc tcttctcctc acttctgtt cccaccactg gactgggctg 1150
 gccagcccc tgtttttcca acattcccca gtatcccag cttctgctgc 1200
 gctggtttgc ggctttggga aataaaatac cgttgtatat attctgccag 1250
 ggggtgttcta gctttttgag gacagctcct gtatccttct catccttgtc 1300
 tctccgcttg tcctcttgtg atgttaggac agagtgagag aagtcagctg 1350
 tcacggggaa ggtgagagag aggatgctaa gcttcctact cactttctcc 1400
 tagccagcct ggactttgga gcgtggggtg ggtgggacaa tggctcccca 1450
 ctctaagcac tgcctcccct actcccgca tctttgggga atcggttccc 1500
 catatgtctt ccttactaga ctgtgagctc ctcgaggggg ggcccgtac 1550
 ccaattcgcc ctatagttag tcgta 1575

<210> 197

<211> 346

<212> PRT

<213> Homo sapiens

<400> 197

Met	Asp	Pro	Ala	Arg	Lys	Ala	Gly	Ala	Gln	Ala	Met	Ile	Trp	Thr
1					5				10					15

Ala	Gly	Trp	Leu	Leu	Leu	Leu	Leu	Leu	Arg	Gly	Gly	Ala	Gln	Ala
			20						25					30

Leu	Glu	Cys	Tyr	Ser	Cys	Val	Gln	Lys	Ala	Asp	Asp	Gly	Cys	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

<210> 198
<211> 1657
<212> DNA
<213> Homo sapiens

<400> 198
cgggactcgg cgggtcctcc tgggagtctc ggaggggacc ggctgtgcag 50
acgccatgga gttggtgctg gtcttcctct gcagcctgct ggcccccatg 100
gtcctggcca gtgcagctga aaaggagaag gaaatggacc cttttcatta 150
tgattaccag accctgagga ttgggggact ggtgttcgct gtggtcctct 200
tctcggttgg gatcctcctt atcctaagtc gcaggtgcaa gtgcagtttc 250
aatcagaagc cccgggcccc aggagatgag gaagcccagg tggagaacct 300
catcaccgcc aatgcaacag agccccagaa gcagagaact gaagtgcagc 350
catcaggtag aagcctctgg aacctgaggc ggctgcttga acctttggat 400
gcaaagtctg atgcttaaga aaaccggcca cttcagcaac agccctttcc 450
ccaggagaag ccaagaactt gtgtgtcccc caccctatcc cctctaacac 500
cattcctcca cctgatgatg caactaacac ttgcctcccc actgcagcct 550
gcggtcctgc ccacctcccg tgatgtgtgt gtgtgtgtgt gtgtgtgact 600
gtgtgtgttt gctaactgtg gtctttgtgg ctacttgttt gtggatggta 650
ttgtgtttgt tagtgaactg tggactcgct ttcccaggca ggggctgagc 700
cacatggcca tctgctcctc cctgcccccg tggccctcca tcacctctg 750
ctcctaggag gctgcttggt gcccgagacc agccccctcc cctgatttag 800
ggatgcgtag ggtaagagca cgggcagtgg tcttcagtgc tcttgggacc 850
tgggaagggt tgcagcactt tgatcatcatt cttcatggac tcctttcact 900
cctttaacaa aaaccttgct tccttatccc acctgatccc agtctgaagg 950
tctcttagca actggagata caaagcaagg agctggtgag cccagcgttg 1000
acgtcaggca ggctatgccc ttccgtgggt aatttcttcc caggggcttc 1050
cacgaggagt ccccatctgc cccgcccctt cacagagcgc ccggggattc 1100
caggcccagg gcttctactc tgcccctggg gaatgtgtcc cctgcataac 1150
ttctcagcaa taactccatg ggctctggga ccctaccctt tccaaccttc 1200
cctgcttctg agacttcaat ctacagccca gctcatccag atgcagacta 1250
cagtccctgc aattgggtct ctggcaggca atagttgaag gactcctgtt 1300
ccgttggggc cagcacaccg ggatggatgg agggagagca gaggcctttg 1350
cttctctgcc tacgtcccct tagatgggca gcagaggcaa ctcccgcatc 1400

ctttgctctg cctgtcgggtg gtcagagcgg tgagcgaggt gggttggaga 1450
 ctacgacggc tccgtgcagc ccttggaac agtgagaggt tgaaggtcat 1500
 aacgagagt ggaactcaac ccagatcccg cccctcctgt cctctgtgtt 1550
 cccgcggaaa ccaaccaaac cgtgcgctgt gacccattgc tgttctctgt 1600
 atcgtgatct atcctcaaca acaacagaaa aaaggaataa aatatacctt 1650
 gtttcct 1657

<210> 199

<211> 120

<212> PRT

<213> Homo sapiens

<400> 199

Met	Glu	Leu	Val	Leu	Val	Phe	Leu	Cys	Ser	Leu	Leu	Ala	Pro	Met
1				5					10					15
Val	Leu	Ala	Ser	Ala	Ala	Glu	Lys	Glu	Lys	Glu	Met	Asp	Pro	Phe
				20					25					30
His	Tyr	Asp	Tyr	Gln	Thr	Leu	Arg	Ile	Gly	Gly	Leu	Val	Phe	Ala
				35					40					45
Val	Val	Leu	Phe	Ser	Val	Gly	Ile	Leu	Leu	Ile	Leu	Ser	Arg	Arg
				50					55					60
Cys	Lys	Cys	Ser	Phe	Asn	Gln	Lys	Pro	Arg	Ala	Pro	Gly	Asp	Glu
				65					70					75
Glu	Ala	Gln	Val	Glu	Asn	Leu	Ile	Thr	Ala	Asn	Ala	Thr	Glu	Pro
				80					85					90
Gln	Lys	Gln	Arg	Thr	Glu	Val	Gln	Pro	Ser	Gly	Gly	Ser	Leu	Trp
				95					100					105
Asn	Leu	Arg	Arg	Leu	Leu	Glu	Pro	Leu	Asp	Ala	Asn	Val	Asp	Ala
				110					115					120

<210> 200

<211> 415

<212> DNA

<213> Homo sapiens

<400> 200

aaacttgacg ccatgaagat cccggtcctt cctgccgtgg tgctcctctc 50
 cctcctgggtg ctccactctg ccagggagc caccctgggt ggtcctgagg 100
 aagaaagcac cattgagaat tatgcgtcac gacccgaggc ctttaacacc 150
 ccgttcctga acatcgacaa attgcatctt gcgtttaagg ctgatgagtt 200
 cctgaactgg cagccctctt ttgagtctat caaaaggaaa cttcctttcc 250
 tcaactggga tgcctttcct aagctgaaag gactgaggag cgcaactcct 300
 gatgccagtg gaccatgacc tccactggaa gagggggcta gcgtgagcgc 350
 tgattctcaa cctaccataa ctctttcctg cctcaggaac tccaataaaa 400

cattttccat ccaaa 415

<210> 201

<211> 99

<212> PRT

<213> Homo sapiens

<400> 201

Met Lys Ile Pro Val Leu Pro Ala Val Val Leu Leu Ser Leu Leu
1 5 10 15

Val Leu His Ser Ala Gln Gly Ala Thr Leu Gly Gly Pro Glu Glu
20 25 30

Glu Ser Thr Ile Glu Asn Tyr Ala Ser Arg Pro Glu Ala Phe Asn
35 40 45

Thr Pro Phe Leu Asn Ile Asp Lys Leu Arg Ser Ala Phe Lys Ala
50 55 60

Asp Glu Phe Leu Asn Trp His Ala Leu Phe Glu Ser Ile Lys Arg
65 70 75

Lys Leu Pro Phe Leu Asn Trp Asp Ala Phe Pro Lys Leu Lys Gly
80 85 90

Leu Arg Ser Ala Thr Pro Asp Ala Gln
95

<210> 202

<211> 678

<212> DNA

<213> Homo sapiens

<400> 202

cagttctgaa atcaatggag ttaatttagg gaatacaaac cagccatggg 50

ggtggagatt gcctttgcct cagtgattct cacctgcctc tcccttctgg 100

cagcaggagt ctcccagggt gttctttctcc agccagttcc aactcaggag 150

acagggtccca aggccatggg agatctctcc tgtggctttg ccggccactc 200

atgagagtgt ttttgtgtaa agtatttttt agaatactgt tgacttcttc 250

atgatttaat aaccatcctt tgcgaagttt tatgaggctt taggggaatg 300

tcaaccctca aatttttggt ataactagatg gcttcattt acccaccact 350

attttaaggt ccctttatct ttaggttcaa ggttcatttg acttgagaaa 400

gtgcccttct gcagcttcat tgattttggt tatcttcact attaattgta 450

acgattaataa aagaataaga gcaogcagac ctctaggaga atattttatc 500

cctgggtgcc cctgacacat ttatgtagtg atcccacaaa tgtgattggt 550

aatttaaatg ttatttotaat attagtagat tcagttgtga tgtaatatga 600

ataaccagaa tctatttctt aaaagttttg agtatatttt tcaactagat 650

atttgtatag aaagactgaa tagtgatg 678

<210> 203
 <211> 52
 <212> PRT
 <213> Homo sapiens

<400> 203
 Met Gly Val Glu Ile Ala Phe Ala Ser Val Ile Leu Thr Cys Leu
 1 5 10 15
 Ser Leu Leu Ala Ala Gly Val Ser Gln Val Val Leu Leu Gln Pro
 20 25 30
 Val Pro Thr Gln Glu Thr Gly Pro Lys Ala Met Gly Asp Leu Ser
 35 40 45
 Cys Gly Phe Ala Gly His Ser
 50

<210> 204
 <211> 1917
 <212> DNA
 <213> Homo sapiens

<400> 204
 ggggaatctg cagtaggtct gccggcgatg gagtgggtggg ctagctcgcc 50
 gcttcggctc tggctgctgt tggtcctcct gccctcagcg cagggccgcc 100
 agaaggagtc aggttcaaaa tggaaagtat ttattgacca aattaacagg 150
 tctttggaga attacgaacc atgttcaagt caaaactgca gctgctacca 200
 tgggtgtcata gaagaggatc taactccttt ccgaggaggc atctccagga 250
 agatgatggc agaggtagtc agacggaagc tagggacca ctatcagatc 300
 actaagaaca gactgtaccg ggaaaatgac tgcattgttc cctcaagggtg 350
 tagtgggtgt gagcacttta ttttggaagt gatcgggctg ctccctgaca 400
 tggagatggt gatcaatgta cgagattatc ctcagggttc taaatggatg 450
 gagcctgcca tcccagtctt ctccttcagt aagacatcag agtaccatga 500
 tatcatgtat cctgcttggg cattttggga agggggacct gctgtttggc 550
 caatttatcc tacagggtct ggacgggtggg acctcttcag agaagatctg 600
 gtaaggtcag cagcacagtg gccatggaaa aagaaaaact ctacagcata 650
 tttccgagga tcaaggacaa gtccagaacg agatcctctc attcttctgt 700
 ctcggaaaaa cccaaaactt gttgatgcag aatacaccaa aaaccaggcc 750
 tggaaatcta tgaaagatac cttaggaaag ccagctgcta aggatgtcca 800
 tcttgtggat cactgcaa atcaagtatct gtttaatttt cgaggcgtag 850
 ctgcaagttt ccggtttaaa cacctcttcc tgtgtggctc acttgttttc 900
 catgttggtg atgagtggct agaattcttc tatccacagc tgaagccatg 950
 gggtcactat atcccagtca aaacagatct ctccaatgtc caagagctgt 1000

tacaatttgt aaaagcaa at gatgatgtag ctcaagagat tgctgaaagg 1050
 ggaagccagt ttattaggaa ccatttgcag atggatgaca tcacctgtta 1100
 ctgggagaac ctcttgagtg aatactctaa attcctgtct tataatgtaa 1150
 cgagaaggaa aggttatgat caaattattc ccaaaatggt gaaaactgaa 1200
 ctatagtagt catcatagga ccatagtctt ctttgtggca acagatctca 1250
 gatatcctac ggtgagaagc ttaccataag cttggctcct ataccttgaa 1300
 tatctgctat caagccaaat acctggtttt ccttatcatg ctgcaccag 1350
 agcaactctt gagaaagatt taaaatgtgt ctaatacact gatatgaagc 1400
 agttcaactt tttggatgaa taaggaccag aaatcgtgag atgtggattt 1450
 tgaacccaac tctacctttc attttcttaa gaccaatcac agcttgtgcc 1500
 tcagatcatc cacctgtgtg agtccatcac tgtgaaattg actgtgtcca 1550
 tgtgatgatg ccctttgtcc cattatttgg agcagaaaaat tcgtcatttg 1600
 gaagtagtac aactcattgc tggaattgtg aaattattca aggcgtgatc 1650
 tctgtcactt tattttaatg taggaaacc tatgggggtt atgaaaaata 1700
 cttggggatc attctctgaa tgggtctaagg aagcggtagc catgccatgc 1750
 aatgatgtag gagttctctt ttgtaaaacc ataaactctg ttactcagga 1800
 ggtttctata atgccacata gaaagaggcc aattgcatga gtaattattg 1850
 caattggatt tcaggttccc ttttgtgcc ttcatgccct acttcttaat 1900
 gcctctctaa agccaaa 1917

<210> 205
 <211> 392
 <212> PRT
 <213> Homo sapiens

<400> 205
 Met Glu Trp Trp Ala Ser Ser Pro Leu Arg Leu Trp Leu Leu Leu
 1 5 10 15
 Phe Leu Leu Pro Ser Ala Gln Gly Arg Gln Lys Glu Ser Gly Ser
 20 25 30
 Lys Trp Lys Val Phe Ile Asp Gln Ile Asn Arg Ser Leu Glu Asn
 35 40 45
 Tyr Glu Pro Cys Ser Ser Gln Asn Cys Ser Cys Tyr His Gly Val
 50 55 60
 Ile Glu Glu Asp Leu Thr Pro Phe Arg Gly Gly Ile Ser Arg Lys
 65 70 75
 Met Met Ala Glu Val Val Arg Arg Lys Leu Gly Thr His Tyr Gln
 80 85 90
 Ile Thr Lys Asn Arg Leu Tyr Arg Glu Asn Asp Cys Met Phe Pro

<211> 1425

<212> DNA

<213> Homo sapiens

<400> 206

cacccctcca tttctcgcca tggccctgc actgctcctg atccctgctg 50
ccctcgctc tttcatcctg gcctttggca ccggagtga gttcgtgcgc 100
tttacctccc ttcggccact tcttgagggt atcccgagt ctggtggtcc 150
ggatgcccgc cagggatggc tggctgcctt gcaggaccgc agcatccttg 200
ccccctggc atgggatctg gggctcctgc ttctatttgt tgggcagcac 250
agcctcatgg cagctgaaag agtgaaggca tggacatccc ggtacttttg 300
ggtccttcag aggtcactgt atgtggcctg cactgccctg gccttgacgc 350
tggtgatgcg gtactgggag ccataccca aaggccctgt gttgtgggag 400
gctcgggctg agccatgggc cacctgggtg ccgctcctct gctttgtgct 450
ccatgtcatc tcctggctcc tcatttttag catccttctc gtctttgact 500
atgctgagct catgggcctc aaacaggtat actaccatgt gctggggctg 550
ggcgagcctc tggccctgaa gtctccccgg gctctcagac tcttctccca 600
cctgcgccac ccagtgtgtg tggagctgct gacagtgctg tgggtggtgc 650
ctaccctggg cacggaccgt ctctccttg ctttctcct taccctctac 700
ctgggcctgg ctacgggct tgatcagcaa gacctccgct acctccgggc 750
ccagctacaa agaaaactcc acctgctctc tcggccccag gatggggagg 800
cagagtgagg agctcactct gggtacaagc cctgttcttc ctctccact 850
gaattctaaa tccttaacat ccaggccctg gctgcttcat gccagaggcc 900
caaatccatg gactgaagga gatgccctt ctactacttg agactttatt 950
ctctgggtcc agctccatac cctaaattct gagtttcagc cactgaactc 1000
caaggccac ttctcaccag caaggaagag tggggtatgg aagtcactctg 1050
tcccttcaact gtttagagca tgacactctc cccctcaaca gcctcctgag 1100
aaggaaagga tctgcctga cactccctt ggcactgtta cttgcctctg 1150
cgctcagggt gtcccttct gcaccgctgg cttccactcc aagaaggtgg 1200
accagggtct gcaagttcaa cggtcatagc tgtccctcca ggccccaacc 1250
ttgcctcacc actccggcc ctagtctctg cacctcctta ggccctgcct 1300
ctgggctcag accccaacct agtcaagggg attctcctgc tcttaactcg 1350
atgacttggg gctccctgct ctcccagga agatgctctg caggaaaata 1400
aaagtcagcc tttttctaaa aaaa 1425

<210> 207
 <211> 262
 <212> PRT
 <213> Homo sapiens

<400> 207

Met	Ala	Pro	Ala	Leu	Leu	Leu	Ile	Pro	Ala	Ala	Leu	Ala	Ser	Phe
1				5					10					15
Ile	Leu	Ala	Phe	Gly	Thr	Gly	Val	Glu	Phe	Val	Arg	Phe	Thr	Ser
				20					25					30
Leu	Arg	Pro	Leu	Leu	Gly	Gly	Ile	Pro	Glu	Ser	Gly	Gly	Pro	Asp
				35					40					45
Ala	Arg	Gln	Gly	Trp	Leu	Ala	Ala	Leu	Gln	Asp	Arg	Ser	Ile	Leu
				50					55					60
Ala	Pro	Leu	Ala	Trp	Asp	Leu	Gly	Leu	Leu	Leu	Phe	Val	Gly	
				65					70					75
Gln	His	Ser	Leu	Met	Ala	Ala	Glu	Arg	Val	Lys	Ala	Trp	Thr	Ser
				80					85					90
Arg	Tyr	Phe	Gly	Val	Leu	Gln	Arg	Ser	Leu	Tyr	Val	Ala	Cys	Thr
				95					100					105
Ala	Leu	Ala	Leu	Gln	Leu	Val	Met	Arg	Tyr	Trp	Glu	Pro	Ile	Pro
				110					115					120
Lys	Gly	Pro	Val	Leu	Trp	Glu	Ala	Arg	Ala	Glu	Pro	Trp	Ala	Thr
				125					130					135
Trp	Val	Pro	Leu	Leu	Cys	Phe	Val	Leu	His	Val	Ile	Ser	Trp	Leu
				140					145					150
Leu	Ile	Phe	Ser	Ile	Leu	Leu	Val	Phe	Asp	Tyr	Ala	Glu	Leu	Met
				155					160					165
Gly	Leu	Lys	Gln	Val	Tyr	Tyr	His	Val	Leu	Gly	Leu	Gly	Glu	Pro
				170					175					180
Leu	Ala	Leu	Lys	Ser	Pro	Arg	Ala	Leu	Arg	Leu	Phe	Ser	His	Leu
				185					190					195
Arg	His	Pro	Val	Cys	Val	Glu	Leu	Leu	Thr	Val	Leu	Trp	Val	Val
				200					205					210
Pro	Thr	Leu	Gly	Thr	Asp	Arg	Leu	Leu	Leu	Ala	Phe	Leu	Leu	Thr
				215					220					225
Leu	Tyr	Leu	Gly	Leu	Ala	His	Gly	Leu	Asp	Gln	Gln	Asp	Leu	Arg
				230					235					240
Tyr	Leu	Arg	Ala	Gln	Leu	Gln	Arg	Lys	Leu	His	Leu	Leu	Ser	Arg
				245					250					255
Pro	Gln	Asp	Gly	Glu	Ala	Glu								
				260										

<210> 208
 <211> 2095
 <212> DNA

<213> Homo sapiens

<400> 208

ccgagcacag gagattgcct gcgttttagga ggtggctgcg ttgtgggaaa 50
agctatcaag gaagaaattg ccaaaccatg tctttttttc tgttttcaga 100
gtagttcaca acagatctga gtgttttaat taagcatgga atacagaaaa 150
caacaaaaaa cttaagcttt aatttcatct ggaattccac agttttctta 200
gctccctgga cccggttgac ctgttggctc ttcccgctgg ctgctctatc 250
acgtggtgct ctccgactac tcaccccgag tgtaaagaac cttcggctcg 300
cgtgcttctg agctgctgtg gatggcctcg gctctctgga ctgtccttcc 350
gagtaggatg tactgagat ccctcaaag gagcctcctg ctgctgtcac 400
tcctgagttt ctttgtgatg tggtaacctc gccttcccca ctacaatgtg 450
atagaacgcg tgaactggat gtacttctat gagtatgagc cgatttacag 500
acaagacttt cacttcacac ttcgagagca ttcaaactgc tctcatcaaa 550
atccatttct ggtcattctg gtgacctccc acccttcaga tgtgaaagcc 600
aggcaggcca ttagagttac ttggggtgaa aaaaagtctt ggtggggata 650
tgaggttctt acatttttct tattaggcca agaggctgaa aaggaagaca 700
aaatgttggc attgtcctta gaggatgaac accttcttta tggtgacata 750
atccgacaag attttttaga cacatataat aacctgacct tgaaaacat 800
tatggcattc aggtgggtaa ctgagttttg cccaatgcc aagtacgtaa 850
tgaagacaga cactgatgtt ttcacataa ctggcaattt agtgaagtat 900
cttttaaac taaaccactc agagaagttt ttcacagggt atcctctaata 950
tgataattat tcctatagag gatttttacca aaaaacccat atttcttacc 1000
aggagtatcc tttcaagggt ttcctccat actgcagtgg gttgggttat 1050
ataatgtcca gagatttggg gcccaaggatc tatgaaatga tgggtcacgt 1100
aaaacccatc aagtttgaag atgtttatgt cgggatctgt ttgaatttat 1150
taaaagtga cattcatatt ccagaagaca caaatctttt ctttctatat 1200
agaatccatt tggatgtctg tcaactgaga cgtgtgattg cagcccatgg 1250
cttttcttcc aaggagatca tcaacttttg gcaggatcatg ctaaggaaca 1300
ccacatgcca ttattaactt cacattctac aaaaagccta gaaggacagg 1350
ataccttggt gaaagtgtta aataaagtag gtactgtgga aaattcatgg 1400
ggaggtcagt gtgctggctt acaactgaact gaaactcatg aaaaaccag 1450
actggagact ggagggttac acttgtgatt tattagtcag gcccttcaaa 1500

gatgatatgt ggaggaatta aatataaagg aattggaggt ttttgctaaa 1550
 gaaattaata ggaccaaaca atttggacat gtcattctgt agactagaat 1600
 ttcttaaaag ggtgttactg agttataagc tcactaggct gtaaaaacaa 1650
 aacaatgtag agttttatatt attgaacaat gtagtcactt gaaggttttg 1700
 tgtatatctt atgtggatta ccaatttaaa aatatatgta gttctgtgtc 1750
 aaaaaacttc ttactgaag ttatactgaa caaaatttta cctgtttttg 1800
 gtcatttata aagtacttca agatgttgca gtatttcaca gttattatta 1850
 tttaaaatta cttcaacttt gtgttttttaa atgttttgac gatttcaata 1900
 caagataaaa aggatagtga atcattcttt acatgcaaac attttccagt 1950
 tacttaactg atcagtttat tattgataca tcactccatt aatgtaaagt 2000
 cataggatcat tattgcatat cagtaatctc ttggactttg ttaaataattt 2050
 tactgtggta atatagagaa gaattaaagc aagaaaatct gaaaa 2095

<210> 209

<211> 331

<212> PRT

<213> Homo sapiens

<400> 209

Met	Ala	Ser	Ala	Leu	Trp	Thr	Val	Leu	Pro	Ser	Arg	Met	Ser	Leu
1				5					10					15
Arg	Ser	Leu	Lys	Trp	Ser	Leu	Leu	Leu	Leu	Ser	Leu	Leu	Ser	Phe
			20						25					30
Phe	Val	Met	Trp	Tyr	Leu	Ser	Leu	Pro	His	Tyr	Asn	Val	Ile	Glu
			35						40					45
Arg	Val	Asn	Trp	Met	Tyr	Phe	Tyr	Glu	Tyr	Glu	Pro	Ile	Tyr	Arg
			50						55					60
Gln	Asp	Phe	His	Phe	Thr	Leu	Arg	Glu	His	Ser	Asn	Cys	Ser	His
			65						70					75
Gln	Asn	Pro	Phe	Leu	Val	Ile	Leu	Val	Thr	Ser	His	Pro	Ser	Asp
			80						85					90
Val	Lys	Ala	Arg	Gln	Ala	Ile	Arg	Val	Thr	Trp	Gly	Glu	Lys	Lys
			95						100					105
Ser	Trp	Trp	Gly	Tyr	Glu	Val	Leu	Thr	Phe	Phe	Leu	Leu	Gly	Gln
			110						115					120
Glu	Ala	Glu	Lys	Glu	Asp	Lys	Met	Leu	Ala	Leu	Ser	Leu	Glu	Asp
			125						130					135
Glu	His	Leu	Leu	Tyr	Gly	Asp	Ile	Ile	Arg	Gln	Asp	Phe	Leu	Asp
			140						145					150
Thr	Tyr	Asn	Asn	Leu	Thr	Leu	Lys	Thr	Ile	Met	Ala	Phe	Arg	Trp
			155						160					165

Val	Thr	Glu	Phe	Cys	Pro	Asn	Ala	Lys	Tyr	Val	Met	Lys	Thr	Asp	170	175	180
Thr	Asp	Val	Phe	Ile	Asn	Thr	Gly	Asn	Leu	Val	Lys	Tyr	Leu	Leu	185	190	195
Asn	Leu	Asn	His	Ser	Glu	Lys	Phe	Phe	Thr	Gly	Tyr	Pro	Leu	Ile	200	205	210
Asp	Asn	Tyr	Ser	Tyr	Arg	Gly	Phe	Tyr	Gln	Lys	Thr	His	Ile	Ser	215	220	225
Tyr	Gln	Glu	Tyr	Pro	Phe	Lys	Val	Phe	Pro	Pro	Tyr	Cys	Ser	Gly	230	235	240
Leu	Gly	Tyr	Ile	Met	Ser	Arg	Asp	Leu	Val	Pro	Arg	Ile	Tyr	Glu	245	250	255
Met	Met	Gly	His	Val	Lys	Pro	Ile	Lys	Phe	Glu	Asp	Val	Tyr	Val	260	265	270
Gly	Ile	Cys	Leu	Asn	Leu	Leu	Lys	Val	Asn	Ile	His	Ile	Pro	Glu	275	280	285
Asp	Thr	Asn	Leu	Phe	Phe	Leu	Tyr	Arg	Ile	His	Leu	Asp	Val	Cys	290	295	300
Gln	Leu	Arg	Arg	Val	Ile	Ala	Ala	His	Gly	Phe	Ser	Ser	Lys	Glu	305	310	315
Ile	Ile	Thr	Phe	Trp	Gln	Val	Met	Leu	Arg	Asn	Thr	Thr	Cys	His	320	325	330

Tyr

<210> 210

<211> 745

<212> DNA

<213> Homo sapiens

<400> 210

```

cctctgtcca ctgctttcgt gaagacaaga tgaagttcac aattgtcttt 50
gctggacttc ttggagtctt totagctoct gccctagcta actataatat 100
caacgtcaat gatgacaaca acaatgctgg aagtgggcag cagtcaagtga 150
gtgtcaacaa tgaacacaat gtggccaatg ttgacaataa caacggatgg 200
gactcctgga attccatctg ggattatgga aatggctttg ctgcaaccag 250
actctttcaa aagaagacat gcattgtgca caaatgaac aaggaagtca 300
tgccctccat tcaatccctt gatgcactgg tcaaggaaaa gaagcttcag 350
ggtaagggac caggaggacc acctcccaag ggctgatgt actcagtcaa 400
cccaaacaaa gtcgatgacc tgagcaagtt cggaaaaaac attgcaaaca 450
tgtgtcgtgg gattccaaca tacatggctg aggagatgca agaggcaagc 500
ctgttttttt actcaggaac gtgctacaog accagtgtac tatggattgt 550

```

ggacatttcc ttctgtggag acacggtgga gaactaaaca atttttttaa 600
gccactatgg atttagtcat ctgaatatgc tgtgcagaaa aaatatgggc 650
tccagtgggtt ttaccatgt cattctgaaa tttttctcta ctagttatgt 700
ttgatttctt taagtttcaa taaaatcatt tagcattgaa aaaaa 745

<210> 211
<211> 185
<212> PRT
<213> Homo sapiens

<400> 211

Met	Lys	Phe	Thr	Ile	Val	Phe	Ala	Gly	Leu	Leu	Gly	Val	Phe	Leu	
1				5					10					15	
Ala	Pro	Ala	Leu	Ala	Asn	Tyr	Asn	Ile	Asn	Val	Asn	Asp	Asp	Asn	
				20					25					30	
Asn	Asn	Ala	Gly	Ser	Gly	Gln	Gln	Ser	Val	Ser	Val	Asn	Asn	Glu	
				35					40					45	
His	Asn	Val	Ala	Asn	Val	Asp	Asn	Asn	Asn	Gly	Trp	Asp	Ser	Trp	
				50					55					60	
Asn	Ser	Ile	Trp	Asp	Tyr	Gly	Asn	Gly	Phe	Ala	Ala	Thr	Arg	Leu	
				65					70					75	
Phe	Gln	Lys	Lys	Thr	Cys	Ile	Val	His	Lys	Met	Asn	Lys	Glu	Val	
				80					85					90	
Met	Pro	Ser	Ile	Gln	Ser	Leu	Asp	Ala	Leu	Val	Lys	Glu	Lys	Lys	
				95					100					105	
Leu	Gln	Gly	Lys	Gly	Pro	Gly	Gly	Pro	Pro	Pro	Lys	Gly	Leu	Met	
				110					115					120	
Tyr	Ser	Val	Asn	Pro	Asn	Lys	Val	Asp	Asp	Leu	Ser	Lys	Phe	Gly	
				125					130					135	
Lys	Asn	Ile	Ala	Asn	Met	Cys	Arg	Gly	Ile	Pro	Thr	Tyr	Met	Ala	
				140					145					150	
Glu	Glu	Met	Gln	Glu	Ala	Ser	Leu	Phe	Phe	Tyr	Ser	Gly	Thr	Cys	
				155					160					165	
Tyr	Thr	Thr	Ser	Val	Leu	Trp	Ile	Val	Asp	Ile	Ser	Phe	Cys	Gly	
				170					175					180	
Asp	Thr	Val	Glu	Asn											
				185											

<210> 212
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 212

catttctgaa actaatcgtg tcagaattga ctttgaaaag cattgctttt 50
tacagaagta tattaacttt ttaggagtaa tttctagttt ggattgtaat 100

atgaaataat ttaaaagggc ttcgctcata tataggaaaa tcgcatatgg 150
 tcctagtatt aaattcttat tgcttactga tttttttgag ttaagagttg 200
 ttatatgcta gaatatgagg atgtgaatat aaataagaga agaaaaaaga 250
 ataaagtaga ttgagtctcc aattttatgt aagcttcaga agaactgggt 300
 tgtttacatg caagcttata gttgaaatat ttttcaggaa ttacatgaat 350
 gacagtcttc gaaccaatgt gtttgttcga tttcaaccag agactatagc 400
 atgtgcttgc atctaccttg cagctagagc acttcagatt ccgttgcca 450
 ctcgtooccca ttggtttctt ctttttggtta ctacagaaga ggaaatccag 500
 gaaatctgca tagaaacact taggctttat accagaaaaa agccaaacta 550
 tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc ttacaagaag 600
 ccaaattaaa agcaaaggga ttgaatccgg atggaactcc agccctttca 650
 accctgggtg gattttctcc agcctccaag ccatcatcac caagagaagt 700
 aaaagctgaa gagaaatcac caatctccat taatgtgaag acagtcaaaa 750
 aagaacctga ggatagacaa caggcttcca aaagccctta caatggtgta 800
 agaaaagaca gcaagagaag tagaaatagc agaagtgcaa gtcgatcgag 850
 gtcaagaaca cgatcacgtt ctagatcaca tactccaaga agacactata 900
 ataataggcg gagtcgatct ggaacataca gctcgagatc aagaagcagg 950
 tcccgcagtc acagtgaag ccctogaaga catcataatc atggttctcc 1000
 tcaccttaag gccaagcata ccagagatga tttaaaaagt tcaaacagac 1050
 atggtcataa aaggaaaaaa totcgttctc gatctcagag caagtctcgg 1100
 gatcactcag atgcagccaa gaaacacagg catgaaaggg gacatcatag 1150
 ggacaggcgt gaacgatctc gtcctttga gaggtcccat aaaagcaagc 1200
 accatgggtg cagtcgctca ggacatggca ggcacaggcg ctgactttct 1250
 cttcctttga gcctgcatca gttcttggtt ttgcctatct acagtgtgat 1300
 gtatggactc aatcaaaaac attaaacgca aactgattag gatttgattt 1350
 cttgaaaccc tctaggctc tagaactg aggacagttt cttttgaaaa 1400
 gaactatggt aatttttttg cacattaaaa tgccctagca gtatctaatt 1450
 aaaaaccatg gtcaggttca attgtacttt attatagttg tgtattgttt 1500
 attgctataa gaactggagc gtgaattctg taaaaatgta tcttattttt 1550
 atacagataa aattgcagac actgttctat ttaagtgggt atttgtttaa 1600
 atgatgggtg atactttctt aacactgggt tgtctgcatg tgtaaagatt 1650
 tttacaagga aataaaatac aaatottggt ttttctaaaa aaaaaaaaaa 1700

aaaagt 1706

<210> 213

<211> 299

<212> PRT

<213> Homo sapiens

<400> 213

Met	Asn	Asp	Ser	Leu	Arg	Thr	Asn	Val	Phe	Val	Arg	Phe	Gln	Pro
1				5					10					15
Glu	Thr	Ile	Ala	Cys	Ala	Cys	Ile	Tyr	Leu	Ala	Ala	Arg	Ala	Leu
				20					25					30
Gln	Ile	Pro	Leu	Pro	Thr	Arg	Pro	His	Trp	Phe	Leu	Leu	Phe	Gly
				35					40					45
Thr	Thr	Glu	Glu	Glu	Ile	Gln	Glu	Ile	Cys	Ile	Glu	Thr	Leu	Arg
				50					55					60
Leu	Tyr	Thr	Arg	Lys	Lys	Pro	Asn	Tyr	Glu	Leu	Leu	Glu	Lys	Glu
				65					70					75
Val	Glu	Lys	Arg	Lys	Val	Ala	Leu	Gln	Glu	Ala	Lys	Leu	Lys	Ala
				80					85					90
Lys	Gly	Leu	Asn	Pro	Asp	Gly	Thr	Pro	Ala	Leu	Ser	Thr	Leu	Gly
				95					100					105
Gly	Phe	Ser	Pro	Ala	Ser	Lys	Pro	Ser	Ser	Pro	Arg	Glu	Val	Lys
				110					115					120
Ala	Glu	Glu	Lys	Ser	Pro	Ile	Ser	Ile	Asn	Val	Lys	Thr	Val	Lys
				125					130					135
Lys	Glu	Pro	Glu	Asp	Arg	Gln	Gln	Ala	Ser	Lys	Ser	Pro	Tyr	Asn
				140					145					150
Gly	Val	Arg	Lys	Asp	Ser	Lys	Arg	Ser	Arg	Asn	Ser	Arg	Ser	Ala
				155					160					165
Ser	Arg	Ser	Arg	Ser	Arg	Thr	Arg	Ser	Arg	Ser	Arg	Ser	His	Thr
				170					175					180
Pro	Arg	Arg	His	Tyr	Asn	Asn	Arg	Arg	Ser	Arg	Ser	Gly	Thr	Tyr
				185					190					195
Ser	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	His	Ser	Glu	Ser	Pro
				200					205					210
Arg	Arg	His	His	Asn	His	Gly	Ser	Pro	His	Leu	Lys	Ala	Lys	His
				215					220					225
Thr	Arg	Asp	Asp	Leu	Lys	Ser	Ser	Asn	Arg	His	Gly	His	Lys	Arg
				230					235					240
Lys	Lys	Ser	Arg	Ser	Arg	Ser	Gln	Ser	Lys	Ser	Arg	Asp	His	Ser
				245					250					255
Asp	Ala	Ala	Lys	Lys	His	Arg	His	Glu	Arg	Gly	His	His	Arg	Asp
				260					265					270
Arg	Arg	Glu	Arg	Ser	Arg	Ser	Phe	Glu	Arg	Ser	His	Lys	Ser	Lys

His His Gly Gly Ser Arg Ser Gly His Gly Arg His Arg Arg
290 295

<210> 214

<211> 730

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 72-73, 85, 91, 127, 226, 268, 454, 484, 513, 566, 663

<223> unknown base

<400> 214

tggggataaa ggaaaaatgg tcaggtatta atggcttaaa gattattgga 50
aggggtttat ctttttttga anntattcgg gtcanaattg nctttgaaaa 100
gcattgcttt ttacagaaat atattanctt ttttagagtaa tttctagttt 150
ggattgtaat atgaaattat ttaaaagggc ttcgctcata tataggaaaa 200
tcgcatatgg tcctagtatt aaattnttat tgcttactga tttttttgag 250
ttaagagttg ttatatgnta gaatatgagg atgtgaatat aaataagaga 300
agaaaaaaga ataaagtaga ttgagtctcc aattttatgt aagcttcaga 350
agaactgggt tgtttacatg caagcttata gttgaaatat ttttcaggaa 400
ttacatgaat gacagtcttc gaaccaatgt gtttggtcga tttcaaccag 450
agantatagc atgtgcttgc atctaccttg cagntagagc acttcagatt 500
ccgttgccaa ctngtcccca ttggtttctt ctttttggtg ctacagaaga 550
ggaaatccag gaaatntgca tagaaacact taggctttat accagaaaaa 600
agccaaacta tgaattactg gaaaaagaag tagaaaaaag aaaagtagcc 650
ttacaagaag ccnaattaaa agcaaaggga ttgaatccgg atggaactcc 700
agccctttca accctgggtg gatttttctcc 730

<210> 215

<211> 1807

<212> DNA

<213> Homo sapiens

<400> 215

ggcacgaggc ctcgtgcca gcttggcacg aggggtgcacc gcgttctcgc 50
acgcgtcatg gcggtcctcg gagtacagct ggtggtgacc ctgctcactg 100
ccaccctcat gcacaggctg gcgccacact gctccttcgc gcgctggctg 150
ctctgtaacg gcagtttgtt ccgatacaag caccctctcg aggaggagct 200
tcgggccctg gcggggaagc cgaggcccag aggcaggaaa gagcgggtggg 250
ccaatggcct tagtgaggag aagccactgt ctgtgccccg agatgccccg 300

ttccagctgg agacctgccc cctcaagacc gtggatgccc tggtcctgcg 350
 cttcttcctg gactaccagt ggtttgtgga ctttgcctgt tactcgggcg 400
 gcgtgtacct cttcacagag gcctactact acatgctggg accagccaag 450
 gagactaaca ttgctgtgtt ctggtgccctg ctcaaggtga ctttctccat 500
 caagatgttc ctgacagtga cacggctgta cttcagcgcc gaggaggggg 550
 gtgagcgctc tgtctgcctc acctttgcct toctcttctt gctgctggcc 600
 atgctgggtgc aagtgggtgcg ggaggagacc ctgagctgg gctgggagcc 650
 tggctgaggc agcatgaccc agaacttaga gccacttctg aagaagcagg 700
 gctgggactg ggcgcttctt gtggccaagc tggctatccg cgtgggactg 750
 gcagtgggtg gctctgtgct gggtgccctt ctacacctcc caggcctgcg 800
 gctggcccag acccaccggg acgcactgac catgtcggag gacagacca 850
 tgctgcagtt cctcctgcac accagcttcc tgtctcccct gttcatcctg 900
 tggctctgga caaagcccat tgcacgggac ttctgcacc agccgccgtt 950
 tggggagacg cgtttctccc tgctgtccga ttctgccttc gactctgggc 1000
 gcctctgggt gctgggtgtg ctgtgcctgc tgcggctggc ggtgaccgag 1050
 cccacctgc aggcctacct gtgcctggcc aaggcccgag tggagcagct 1100
 gcgaaggag gctggccgca tcgaagcccg tgaaatccag cagagggtgg 1150
 tccgagtcta ctgctatgtg accgtgtgta gcttgcagta cctgacgccg 1200
 ctcatcctca cctcaactg cacacttctg ctcaagacgc tgggaggcta 1250
 ttctggggc ctgggcccag ctctctact atccccgac ccatcctcag 1300
 ccagcgctgc ccccatcgcc tctggggagg acgaagtcca gcagactgca 1350
 gcgaggattg ccggggccct gggtgccctg cttactcccc tcttctccg 1400
 tggcgtcctg gcctacctca tctggtggac ggctgcctgc cagctgctcg 1450
 ccagcctttt cggcctctac ttccaccagc acttggcagg ctctagctg 1500
 cctgcagacc ctctggggc cctgaggtct gttctgggg cagcgggaca 1550
 cttagcctgc cctctgttt gcgccccgt gtcccagct gcaagggtgg 1600
 gccggactcc ccggcgctc cttaccaca gtgctgacc cgcggcccc 1650
 cttggacgcc gagtttctgc ctcaagactg tctctctgg gccagcagc 1700
 atgagggtcc cgaggccatt gtctccgaag cgtatgtgcc aggtttgagt 1750
 ggcgagggtg atgctggctg ctctctgaa caaataaagg agcatgccga 1800
 tttttaa 1807

<210> 216

<211> 479
 <212> PRT
 <213> Homo sapiens

<400> 216

Met	Ala	Val	Leu	Gly	Val	Gln	Leu	Val	Val	Thr	Leu	Leu	Thr	Ala
1				5					10					15
Thr	Leu	Met	His	Arg	Leu	Ala	Pro	His	Cys	Ser	Phe	Ala	Arg	Trp
				20					25					30
Leu	Leu	Cys	Asn	Gly	Ser	Leu	Phe	Arg	Tyr	Lys	His	Pro	Ser	Glu
				35					40					45
Glu	Glu	Leu	Arg	Ala	Leu	Ala	Gly	Lys	Pro	Arg	Pro	Arg	Gly	Arg
				50					55					60
Lys	Glu	Arg	Trp	Ala	Asn	Gly	Leu	Ser	Glu	Glu	Lys	Pro	Leu	Ser
				65					70					75
Val	Pro	Arg	Asp	Ala	Pro	Phe	Gln	Leu	Glu	Thr	Cys	Pro	Leu	Thr
				80					85					90
Thr	Val	Asp	Ala	Leu	Val	Leu	Arg	Phe	Phe	Leu	Glu	Tyr	Gln	Trp
				95					100					105
Phe	Val	Asp	Phe	Ala	Val	Tyr	Ser	Gly	Gly	Val	Tyr	Leu	Phe	Thr
				110					115					120
Glu	Ala	Tyr	Tyr	Tyr	Met	Leu	Gly	Pro	Ala	Lys	Glu	Thr	Asn	Ile
				125					130					135
Ala	Val	Phe	Trp	Cys	Leu	Leu	Thr	Val	Thr	Phe	Ser	Ile	Lys	Met
				140					145					150
Phe	Leu	Thr	Val	Thr	Arg	Leu	Tyr	Phe	Ser	Ala	Glu	Glu	Gly	Gly
				155					160					165
Glu	Arg	Ser	Val	Cys	Leu	Thr	Phe	Ala	Phe	Leu	Phe	Leu	Leu	Leu
				170					175					180
Ala	Met	Leu	Val	Gln	Val	Val	Arg	Glu	Glu	Thr	Leu	Glu	Leu	Gly
				185					190					195
Leu	Glu	Pro	Gly	Leu	Ala	Ser	Met	Thr	Gln	Asn	Leu	Glu	Pro	Leu
				200					205					210
Leu	Lys	Lys	Gln	Gly	Trp	Asp	Trp	Ala	Leu	Pro	Val	Ala	Lys	Leu
				215					220					225
Ala	Ile	Arg	Val	Gly	Leu	Ala	Val	Val	Gly	Ser	Val	Leu	Gly	Ala
				230					235					240
Phe	Leu	Thr	Phe	Pro	Gly	Leu	Arg	Leu	Ala	Gln	Thr	His	Arg	Asp
				245					250					255
Ala	Leu	Thr	Met	Ser	Glu	Asp	Arg	Pro	Met	Leu	Gln	Phe	Leu	Leu
				260					265					270
His	Thr	Ser	Phe	Leu	Ser	Pro	Leu	Phe	Ile	Leu	Trp	Leu	Trp	Thr
				275					280					285
Lys	Pro	Ile	Ala	Arg	Asp	Phe	Leu	His	Gln	Pro	Pro	Phe	Gly	Glu

actcgggcgg cgtgtacctc ttcacagagg cctactacta catgctggga 400
ccagccaagg agactaacat tgctgtgttc tggcgcctgc tcacagtgc 450
cttctccatc aagatgttcc tgacagtgc acggctgtac ttcagcgccg 500
aggagggggg tgagcgctct gtctgcctca cctttgcctt cctcttctg 550
ctgctggcca tgctgggtgca agcg 574

<210> 218
<211> 2571
<212> DNA
<213> Homo sapiens

<400> 218
ggttcctaca tcctctcatc tgagaatcag agagcataat cttcttacgg 50
gcccgtgatt tattaacgtg gcttaatctg aaggttctca gtcaaattct 100
ttgtgatcta ctgattgtgg gggcatggca aggtttgctt aaaggagctt 150
ggctgggttg ggcccttgta gctgacagaa ggtggccagg gagaatgcag 200
cactctgctc ggagaatgaa ggcgcttctg ttgctgggtc tgccttggtc 250
cagtcctgct aactacattg acaatgtggg caacctgcac ttcctgtatt 300
cagaactctg taaagggtgc tccactacg gcctgaccaa agataggaag 350
aggcgctcac aagatggctg tocagacggc tgtgcgagcc tcacagccac 400
ggctccctcc ccagagggtt ctgcagctgc caccatctcc ttaatgacag 450
acgagcctgg cctagacaac cctgcctacg tgtcctcggc agaggacggg 500
cagccagcaa tcagcccagt ggactctggc cggagcaacc gaactagggc 550
acggcccttt gagagatcca ctattagaag cagatcattt aaaaaataa 600
atcgagcttt gagtgttctt cgaaggacaa agagcgggag tgcagttgcc 650
aaccatgccg accagggcag ggaaaattct gaaaacacca ctgcccctga 700
agtctttcca aggttgtagc acctgattcc agatggtgaa attaccagca 750
tcaagatcaa tcgagtagat ccagtgaaa gcctctctat taggctggtg 800
ggaggtagcg aaacccaact ggtccatata attatccaac acatttatcg 850
tgatgggggtg atcgccagag acggccggct actgccagga gacatcattc 900
taaagggtcaa cgggatggac atcagcaatg tccctcacia ctacgtgtg 950
cgtctcctgc ggcagccctg ccagggtgctg tggctgactg tgatgcgtga 1000
acagaagttc cgcagcagga acaatggaca ggccccgat gcctacagac 1050
cccagatga cagctttcat gtgattctca acaaaagtag ccccgaggag 1100
cagcttgga taaaactggg gcgcaagggt gatgagcctg gggttttcat 1150
cttcaatgtg ctggatggcg gtgtggcata tcgacatggt cagcttgagg 1200

agaatgaccg tgtgttagcc atcaatggac atgatcttcg atatggcagc 1250
 ccagaaagtg cggctcatct gattcaggcc agtgaaagac gtgttcacct 1300
 cgtcgtgtcc cgccagggtc ggcagcggag ccctgacatc tttcaggaag 1350
 ccggctggaa cagcaatggc agctgggtccc cagggccagg ggagaggagc 1400
 aacactccca agcccccca tcctacaatt acttgtcatg agaagggtgt 1450
 aaatatccaa aaagaccccg gtgaatctct cggcatgacc gtcgcagggg 1500
 gagcatcaca tagagaatgg gatttgccta tctatgtcat cagtgttgag 1550
 cccggaggag tcataagcag agatggaaga ataaaaacag gtgacatttt 1600
 gttgaatgtg gatgggggtc aactgacaga ggtcagccgg agtgaggcag 1650
 tggcattatt gaaaagaaca tcctcctcga tagtactcaa agctttggaa 1700
 gtcaaagagt atgagcccca ggaagactgc agcagcccag cagccctgga 1750
 ctccaaccac aacatggccc caccagtgga ctgggtccca tcctgggtca 1800
 tgtggctgga attaccacgg tgcttgata actgtaaaga tattgtatta 1850
 cgaagaaaca cagctggaag tctgggcttc tgcattgtag gaggttatga 1900
 agaatacaat ggaaacaaac cttttttcat caaatccatt gttgaaggaa 1950
 caccagcata caatgatgga agaattagat gtggtgatat tcttcttgct 2000
 gtcaatggta gaagtacatc aggaatgata catgcttgct tggcaagact 2050
 gctgaaagaa cttaaaggaa gaattactct aactattgtt tcttggcctg 2100
 gcactttttt atagaatcaa tgatgggtca gaggaaaaca gaaaaatcac 2150
 aaataggcta agaagttgaa acactatatt tatcttgta gtttttata 2200
 ttaaagaaag aatacattgt aaaaatgtca ggaaaagtat gatcatctaa 2250
 tgaaagccag ttacacctca gaaaatatga ttccaaaaaa attaaaacta 2300
 ctagtttttt ttcagtgtgg aggatttctc attactctac aacattgttt 2350
 atattttttc tattcaataa aaagccctaa aacaactaaa atgattgatt 2400
 tgtatacccc actgaattca agctgattta aatttaaaat ttggtatatg 2450
 ctgaagtctg ccaagggtac attatggcca tttttaattt acagctaaaa 2500
 tattttttta aatgcattgc tgagaaacgt tgctttcatc aaacaagaat 2550
 aaatattttt cagaagttaa a 2571

<210> 219

<211> 632

<212> PRT

<213> Homo sapiens

<400> 219

Met Lys Ala Leu Leu Leu Leu Val Leu Pro Trp Leu Ser Pro Ala

<210> 220
 <211> 773
 <212> DNA
 <213> Homo sapiens

<400> 220
 ccaaagtgat catttgaaaa agagatatcc acatcttcaa gcccatataa 50
 aggatagaag ctgcacaggg cagctttact tactccagca ccttcctctc 100
 ccaggcaaat ggtgctgacc atctttggga tacaatctca tggatacgag 150
 gtttttaaca tcatcagccc aagcaacaat ggtggcaatg ttcaggagac 200
 agtgacaatt gataatgaaa aaaataccgc catcgttaac atccatgcag 250
 gatcatgctc ttctaccaca atttttgact ataaacatgg ctacattgca 300
 tccaggggtgc tctcccgaag agcctgcttt atcctgaaga tggaccatca 350
 gaacatccct cctctgaaca atctccaatg gtacatctat gagaaacagg 400
 ctctggacaa catgttctcc aacaaatata cctgggtcaa gtacaaccct 450
 ctggagtctc tgatcaaaga cgtggattgg ttcttgcttg ggtcacccat 500
 tgagaaactc tgcaaacata tccctttgta taagggggaa gtggttgaaa 550
 acacacataa tgtcggtgct ggaggctgtg caaaggctgg gctcctgggc 600
 atcttgggaa tttcaatctg tgcagacatt catgtttagg atgattagcc 650
 ctcttgtttt atcttttcaa agaaatacat ccttggttta cactcaaaag 700
 tcaaattaaa ttctttccca atgcccacac taattttgag attcagtcag 750
 aaaatataaa tgctgtattt ata 773

<210> 221
 <211> 184
 <212> PRT
 <213> Homo sapiens

<400> 221
 Met Lys Ile Leu Val Ala Phe Leu Val Val Leu Thr Ile Phe Gly
 1 5 10 15
 Ile Gln Ser His Gly Tyr Glu Val Phe Asn Ile Ile Ser Pro Ser
 20 25 30
 Asn Asn Gly Gly Asn Val Gln Glu Thr Val Thr Ile Asp Asn Glu
 35 40 45
 Lys Asn Thr Ala Ile Val Asn Ile His Ala Gly Ser Cys Ser Ser
 50 55 60
 Thr Thr Ile Phe Asp Tyr Lys His Gly Tyr Ile Ala Ser Arg Val
 65 70 75
 Leu Ser Arg Arg Ala Cys Phe Ile Leu Lys Met Asp His Gln Asn
 80 85 90

Ile	Pro	Pro	Leu	Asn	Asn	Leu	Gln	Trp	Tyr	Ile	Tyr	Glu	Lys	Gln
				95					100					105
Ala	Leu	Asp	Asn	Met	Phe	Ser	Asn	Lys	Tyr	Thr	Trp	Val	Lys	Tyr
				110					115					120
Asn	Pro	Leu	Glu	Ser	Leu	Ile	Lys	Asp	Val	Asp	Trp	Phe	Leu	Leu
				125					130					135
Gly	Ser	Pro	Ile	Glu	Lys	Leu	Cys	Lys	His	Ile	Pro	Leu	Tyr	Lys
				140					145					150
Gly	Glu	Val	Val	Glu	Asn	Thr	His	Asn	Val	Gly	Ala	Gly	Gly	Cys
				155					160					165
Ala	Lys	Ala	Gly	Leu	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ile	Cys	Ala
				170					175					180

Asp Ile His Val

<210> 222

<211> 992

<212> DNA

<213> Homo sapiens

<400> 222

```

ggcacgagcc aggaactagg aggttctcac tgcccagca gaggcctac 50
accaccgag gcatgggct ccctgggctg ttctgcttg ccgtgctggc 100
tgccagcagc ttctccaagg cacgggagga agaaattacc cctgtggtct 150
ccattgccta caaagtctg gaaattttcc ccaaaggccg ctgggtgctc 200
ataacctgct gtgcaccca gccaccacg cccatcacct attccctctg 250
tggaaccaag aacatcaagg tggccaagaa ggtggtgaag acccagagc 300
cggcctcctt caacctcaac gtcacactca agtccagtcc agacctgctc 350
acctacttct gccgggcgtc ctccacctca ggtgcccatg tggacagtgc 400
caggctacag atgcactggg agctgtggtc caagccagtg tctgagctgc 450
gggccaactt cactctgcag gacagagggg caggccccag ggtggagatg 500
atctgccagg cgtcctcggg cagcccacct atcaccaaca gcctgatcgg 550
gaaggatggg caggccacc tgcagcagag accatgccac aggcagcctg 600
ccaacttctc cttcctgcg agccagacat cggactggtt ctggtgccag 650
gctgcaaaca acgccaatgt ccagcacagc gccctcacag tggtgcccc 700
agtggtgac cagaagatgg aggactggca gggcccctg gagagcccca 750
tccttgctt gccgtctac aggagcacc gccgtctgag tgaagaggag 800
tttgggggt tcaggatagg gaatggggag gtcagaggac gcaaagcagc 850
agccatgtag aatgaaccgt ccagagagcc aagcacggca gaggactgca 900

```

ggccatcagc gtgcactgtt cgtatttggga gttcatgcaa aatgagtgtg 950

ttttagctgc tcttgccaca aaaaaaaaaa aaaaaaaaaa aa 992

<210> 223

<211> 265

<212> PRT

<213> Homo sapiens

<400> 223

Met	Gly	Leu	Pro	Gly	Leu	Phe	Cys	Leu	Ala	Val	Leu	Ala	Ala	Ser
1				5					10					15
Ser	Phe	Ser	Lys	Ala	Arg	Glu	Glu	Glu	Ile	Thr	Pro	Val	Val	Ser
				20					25					30
Ile	Ala	Tyr	Lys	Val	Leu	Glu	Val	Phe	Pro	Lys	Gly	Arg	Trp	Val
				35					40					45
Leu	Ile	Thr	Cys	Cys	Ala	Pro	Gln	Pro	Pro	Pro	Pro	Ile	Thr	Tyr
				50					55					60
Ser	Leu	Cys	Gly	Thr	Lys	Asn	Ile	Lys	Val	Ala	Lys	Lys	Val	Val
				65					70					75
Lys	Thr	His	Glu	Pro	Ala	Ser	Phe	Asn	Leu	Asn	Val	Thr	Leu	Lys
				80					85					90
Ser	Ser	Pro	Asp	Leu	Leu	Thr	Tyr	Phe	Cys	Arg	Ala	Ser	Ser	Thr
				95					100					105
Ser	Gly	Ala	His	Val	Asp	Ser	Ala	Arg	Leu	Gln	Met	His	Trp	Glu
				110					115					120
Leu	Trp	Ser	Lys	Pro	Val	Ser	Glu	Leu	Arg	Ala	Asn	Phe	Thr	Leu
				125					130					135
Gln	Asp	Arg	Gly	Ala	Gly	Pro	Arg	Val	Glu	Met	Ile	Cys	Gln	Ala
				140					145					150
Ser	Ser	Gly	Ser	Pro	Pro	Ile	Thr	Asn	Ser	Leu	Ile	Gly	Lys	Asp
				155					160					165
Gly	Gln	Val	His	Leu	Gln	Gln	Arg	Pro	Cys	His	Arg	Gln	Pro	Ala
				170					175					180
Asn	Phe	Ser	Phe	Leu	Pro	Ser	Gln	Thr	Ser	Asp	Trp	Phe	Trp	Cys
				185					190					195
Gln	Ala	Ala	Asn	Asn	Ala	Asn	Val	Gln	His	Ser	Ala	Leu	Thr	Val
				200					205					210
Val	Pro	Pro	Gly	Gly	Asp	Gln	Lys	Met	Glu	Asp	Trp	Gln	Gly	Pro
				215					220					225
Leu	Glu	Ser	Pro	Ile	Leu	Ala	Leu	Pro	Leu	Tyr	Arg	Ser	Thr	Arg
				230					235					240
Arg	Leu	Ser	Glu	Glu	Glu	Phe	Gly	Gly	Phe	Arg	Ile	Gly	Asn	Gly
				245					250					255
Glu	Val	Arg	Gly	Arg	Lys	Ala	Ala	Ala	Met					
				260					265					

<210> 224
<211> 1297
<212> DNA
<213> Homo sapiens

<400> 224
ggtccttaat ggcagcagcc gccgctacca agatccttct gtgcctcccg 50
cttctgctcc tgctgtccgg ctgggtccgg gctgggagag ccgaccctca 100
ctctctttgc tatgacatca ccgtcatccc taagtccaga cctggaccac 150
ggtggtgtgc ggttcaaggc caggtggatg aaaagacttt tcttcactat 200
gactgtggca acaagacagt cacacctgtc agtcccctgg ggaagaaact 250
aatgtcaca acggcctgga aagcacagaa cccagtactg agagaggtgg 300
tggacatact tacagagcaa ctgcgtgaca ttcagctgga gaattacaca 350
cccaaggaac ccctcaccct gcaggcaagg atgtcttctg agcagaaaagc 400
tgaaggacac agcagtggat cttggcagtt cagtttcgat gggcagatct 450
tcctcctctt tgactcagag aagagaatgt ggacaacggt tcatcctgga 500
gccagaaaga tgaaagaaaa gtgggagaat gacaagggtg tggccatgtc 550
cttcattac ttctcaatgg gagaactgtat aggatggctt gaggacttct 600
tgatgggcat ggacagcacc ctggagccaa gtgcaggagc accactcgcc 650
atgtcctcag gcacaacca actcagggcc acagccacca cctcatcct 700
ttgctgctc ctcatcatcc tcccctgctt catcctccct ggcattctgag 750
gagagtcctt tagagtgaca ggttaaagct gataccaaaa ggctcctgtg 800
agcacggtct tgatcaaact cgcccttctg totggccagc tgcccacgac 850
ctacggtgta tgtccagtgg cctccagcag atcatgatga catcatggac 900
ccaatagctc attcactgcc ttgattcctt ttgccaacaa ttttaccagc 950
agttatacct aacatattat gcaattttct cttggtgcta cctgatggaa 1000
ttcctgcact taaagttctg gctgactaaa caagatatat cattttcttt 1050
cttctctttt tgtttggaat atcaagtact tctttgaatg atgatctctt 1100
tcttgcaaat gatattgtca gtaaaataat cacgttagac ttcagacctc 1150
tggggattct ttccgtgtcc tgaaagagaa tttttaaatt atttaataag 1200
aaaaaattta tattaatgat tgtttccttt agtaatttat tgttctgtac 1250
tgatatttaa ataaagagtt ctatttccca aaaaaaaaaa aaaaaaa 1297

<210> 225
<211> 246
<212> PRT
<213> Homo sapiens

<400> 225

Met Ala Ala Ala Ala Thr Lys Ile Leu Leu Cys Leu Pro Leu
1 5 10 15
Leu Leu Leu Leu Ser Gly Trp Ser Arg Ala Gly Arg Ala Asp Pro
20 25 30
His Ser Leu Cys Tyr Asp Ile Thr Val Ile Pro Lys Phe Arg Pro
35 40 45
Gly Pro Arg Trp Cys Ala Val Gln Gly Gln Val Asp Glu Lys Thr
50 55 60
Phe Leu His Tyr Asp Cys Gly Asn Lys Thr Val Thr Pro Val Ser
65 70 75
Pro Leu Gly Lys Lys Leu Asn Val Thr Thr Ala Trp Lys Ala Gln
80 85 90
Asn Pro Val Leu Arg Glu Val Val Asp Ile Leu Thr Glu Gln Leu
95 100 105
Arg Asp Ile Gln Leu Glu Asn Tyr Thr Pro Lys Glu Pro Leu Thr
110 115 120
Leu Gln Ala Arg Met Ser Cys Glu Gln Lys Ala Glu Gly His Ser
125 130 135
Ser Gly Ser Trp Gln Phe Ser Phe Asp Gly Gln Ile Phe Leu Leu
140 145 150
Phe Asp Ser Glu Lys Arg Met Trp Thr Thr Val His Pro Gly Ala
155 160 165
Arg Lys Met Lys Glu Lys Trp Glu Asn Asp Lys Val Val Ala Met
170 175 180
Ser Phe His Tyr Phe Ser Met Gly Asp Cys Ile Gly Trp Leu Glu
185 190 195
Asp Phe Leu Met Gly Met Asp Ser Thr Leu Glu Pro Ser Ala Gly
200 205 210
Ala Pro Leu Ala Met Ser Ser Gly Thr Thr Gln Leu Arg Ala Thr
215 220 225
Ala Thr Thr Leu Ile Leu Cys Cys Leu Leu Ile Ile Leu Pro Cys
230 235 240
Phe Ile Leu Pro Gly Ile
245

<210> 226

<211> 735

<212> DNA

<213> Homo sapiens

<400> 226

gggaaagcca ttctgaaaac ccatctatac aaactatata ttttcatttc 50
tgctgctagc tgccttgggc ctcacaattt tcattctggt ttctgacttt 100
caagttatat accgtggaat ggagttgatc ccaaccataa catcgtggag 150

gggttttaatt ttggtggtag ccctcaccca attctggtgt ggctttcttt 200
 gcagaggatt ccaccttcaa aatcatgaac tctggctgtt gatcaaaaga 250
 gaatttggat tctactctaa aagtcaatat aggacttggc aaaagaagct 300
 agcagaagac tcaacctggc ctcccataaa caggacagat tattcaggtg 350
 atggcaaaaaa tggattctac atcaacggag gctatgaaag ccatgaacag 400
 attccaaaaa gaaaactcaa attgggaggc caaccacag aacagcattt 450
 ctggggccagg ctgtaatcag aattgtcgtc gtacatgctc aacagcattg 500
 cttttttccc caaaattaac acattgtgga gaagtgatga tactctcccc 550
 ttacctttcc tctctccatt caagcattca aagtatattt tcaatgaatt 600
 aaaccttgca gcaagggacc ttagataggc ttattctgac tgtatgcttt 650
 accaatgaga gaaaaaaatg catttcctgt atcatccttt tcaataaact 700
 gtattcattt tgaaaaaaaa aaaaaaaaaa aaaaa 735

<210> 227
 <211> 115
 <212> PRT
 <213> Homo sapiens

<400> 227
 Met Glu Leu Ile Pro Thr Ile Thr Ser Trp Arg Val Leu Ile Leu
 1 5 10 15
 Val Val Ala Leu Thr Gln Phe Trp Cys Gly Phe Leu Cys Arg Gly
 20 25 30
 Phe His Leu Gln Asn His Glu Leu Trp Leu Leu Ile Lys Arg Glu
 35 40 45
 Phe Gly Phe Tyr Ser Lys Ser Gln Tyr Arg Thr Trp Gln Lys Lys
 50 55 60
 Leu Ala Glu Asp Ser Thr Trp Pro Pro Ile Asn Arg Thr Asp Tyr
 65 70 75
 Ser Gly Asp Gly Lys Asn Gly Phe Tyr Ile Asn Gly Gly Tyr Glu
 80 85 90
 Ser His Glu Gln Ile Pro Lys Arg Lys Leu Lys Leu Gly Gly Gln
 95 100 105
 Pro Thr Glu Gln His Phe Trp Ala Arg Leu
 110 115

<210> 228
 <211> 2185
 <212> DNA
 <213> Homo sapiens

<400> 228
 gttctccttt ccgagccaaa atcccaggcg atggtgaatt atgaacgtgc 50
 cacaccatga agctcttgtg gcaggtaact gtgcaccacc acacctggaa 100

tgccatcctg ctcccgttcg tctacctcac ggcgcaagtg tggattctgt 150
 gtgcagccat cgctgctgcc gcctcagccg ggccccagaa ctgcccctcc 200
 gtttgctcgt gcagtaacca gttcagcaag gtggtgtgca cgcgccgggg 250
 cctctccgag gtcccgcagg gtattccctc gaacaccccg tacctcaacc 300
 tcatggagaa caacatccag atgatccagg ccgacacctt ccgccacctc 350
 caccacctgg aggtcctgca gttgggcagg aactccatcc ggagattga 400
 ggtggggggc ttcaacggcc tggccagcct caacaccctg gagctgttcg 450
 acaactggct gacagtcac cctagcgggg cctttgaata cctgtccaag 500
 ctgcggggagc tctggcttcg caacaacccc atcgaaagca tcccctctta 550
 cgccttcaac cgggtgccct ccctcatgcg cctggacttg ggggagctca 600
 agaagctgga gtatatctct gagggagctt ttgaggggct gttcaacctc 650
 aagtatctga acttgggcat gtgcaacatt aaagacatgc ccaatctcac 700
 cccoctggtg gggctggagg agctggagat gtcagggaac cacttccctg 750
 agatcaggcc tggctccttc catggcctga gctccctcaa gaagctctgg 800
 gtcatgaact cacaggtcag cctgattgag cggaatgctt ttgacgggct 850
 ggcttcactt gtggaactca acttggccca caataacctc tcttctttgc 900
 cccatgacct ctttaccocg ctgaggtacc tgggtggagt gcactctacac 950
 cacaaccctt ggaactgtga ttgtgacatt ctgtggctag cctgggtggct 1000
 tcgagagtat ataccacca attccacctg ctgtggccgc tgtcatgctc 1050
 ccatgcacat gcgaggccgc tacctcgtgg aggtggacca ggcctccttc 1100
 cagtgtcttg cccocttcat catggacgca cctcgagacc tcaacatttc 1150
 tgagggtcgg atggcagaac ttaagtgtcg gactccccct atgtcctccg 1200
 tgaagtgggt gctgccaat gggacagtgc tcagccacgc ctcccgccac 1250
 ccaaggatct ctgtcctcaa cgacggcacc ttgaactttt cccacgtgct 1300
 gctttcagac actggggtgt acacatgcat ggtgaccaat gttgcaggca 1350
 actccaacgc ctcggoctac ctcaatgtga gcacggctga gcttaacacc 1400
 tccaactaca gcttcttcac cacagtaaca gtggagacca cggagatctc 1450
 gcctgaggac acaacgcgaa agtacaagcc tgttcctacc acgtccactg 1500
 gttaccagcc ggcatatacc acctctacca cgggtgctcat tcagactacc 1550
 cgtgtgcca agcaggtggc agtaccgcg acagacacca ctgacaagat 1600
 gcagaccagc ctggatgaag tcatgaagac caccaagatc atcattggct 1650
 gctttgtggc agtgactctg ctagctgccg ccatgttgat tgtcttctat 1700

aaacttcgta agcggcacca gcagcggagt acagtcacag ccgcccggac 1750
 tgttgagata atccaggtgg acgaagacat cccagcagca acatccgcag 1800
 cagcaacagc agctccgtcc ggtgtatcag gtgagggggc agtagtgctg 1850
 cccacaattc atgaccatat taactacaac acctacaaac cagcacatgg 1900
 ggcccactgg acagaaaaca gcctggggaa ctctctgcac cccacagtca 1950
 ccactatctc tgaaccttat ataattcaga cccataccaa ggacaaggta 2000
 caggaaactc aaatatgact cccctcccc aaaaaactta taaaatgcaa 2050
 tagaatgcac acaaagacag caacttttgt acagagtggg gagagacttt 2100
 ttcttgata tgcttatata ttaagtctat gggctggtta aaaaaaacag 2150
 attatattaa aatttaaaga caaaaagtca aaaca 2185

<210> 229
 <211> 653
 <212> PRT
 <213> Homo sapiens

<400> 229
 Met Lys Leu Leu Trp Gln Val Thr Val His His His Thr Trp Asn
 1 5 10 15
 Ala Ile Leu Leu Pro Phe Val Tyr Leu Thr Ala Gln Val Trp Ile
 20 25 30
 Leu Cys Ala Ala Ile Ala Ala Ala Ala Ser Ala Gly Pro Gln Asn
 35 40 45
 Cys Pro Ser Val Cys Ser Cys Ser Asn Gln Phe Ser Lys Val Val
 50 55 60
 Cys Thr Arg Arg Gly Leu Ser Glu Val Pro Gln Gly Ile Pro Ser
 65 70 75
 Asn Thr Arg Tyr Leu Asn Leu Met Glu Asn Asn Ile Gln Met Ile
 80 85 90
 Gln Ala Asp Thr Phe Arg His Leu His His Leu Glu Val Leu Gln
 95 100 105
 Leu Gly Arg Asn Ser Ile Arg Gln Ile Glu Val Gly Ala Phe Asn
 110 115 120
 Gly Leu Ala Ser Leu Asn Thr Leu Glu Leu Phe Asp Asn Trp Leu
 125 130 135
 Thr Val Ile Pro Ser Gly Ala Phe Glu Tyr Leu Ser Lys Leu Arg
 140 145 150
 Glu Leu Trp Leu Arg Asn Asn Pro Ile Glu Ser Ile Pro Ser Tyr
 155 160 165
 Ala Phe Asn Arg Val Pro Ser Leu Met Arg Leu Asp Leu Gly Glu
 170 175 180
 Leu Lys Lys Leu Glu Tyr Ile Ser Glu Gly Ala Phe Glu Gly Leu

	500		505		510
Thr Thr Asp Lys	Met Gln Thr Ser Leu	Asp Glu Val Met Lys	Thr		
	515		520		525
Thr Lys Ile Ile	Ile Gly Cys Phe Val	Ala Val Thr Leu Leu	Ala		
	530		535		540
Ala Ala Met Leu	Ile Val Phe Tyr Lys	Leu Arg Lys Arg His	Gln		
	545		550		555
Gln Arg Ser Thr	Val Thr Ala Ala Arg	Thr Val Glu Ile Ile	Gln		
	560		565		570
Val Asp Glu Asp	Ile Pro Ala Ala Thr	Ser Ala Ala Ala Thr	Ala		
	575		580		585
Ala Pro Ser Gly	Val Ser Gly Glu Gly	Ala Val Val Leu Pro	Thr		
	590		595		600
Ile His Asp His	Ile Asn Tyr Asn Thr	Tyr Lys Pro Ala His	Gly		
	605		610		615
Ala His Trp Thr	Glu Asn Ser Leu Gly	Asn Ser Leu His Pro	Thr		
	620		625		630
Val Thr Thr Ile	Ser Glu Pro Tyr Ile	Ile Gln Thr His Thr	Lys		
	635		640		645
Asp Lys Val Gln	Glu Thr Gln Ile				
	650				

<210> 230
 <211> 2846
 <212> DNA
 <213> Homo sapiens

<400> 230
 cgctcgggca ccagccgcgg caaggatgga gctgggttgc tggacgcagt 50
 tggggctcac ttttcttcag ctcttctca tctcgtcctt gccaagagag 100
 tacacagtca ttaatgaagc ctgccctgga gcagagtgga atatcatgtg 150
 tcgggagtgct tgtgaatatg atcagattga gtgcgtctgc cccggaaaga 200
 gggaagtcgt gggttatacc atcccttgct gcaggaatga ggagaatgag 250
 tgtgactcct gcctgatcca cccaggttgt accatctttg aaaactgcaa 300
 gagctgccga aatggctcat gggggggtac cttggatgac ttctatgtga 350
 aggggttcta ctgtgcagag tgccgagcag gctggtacgg aggagactgc 400
 atgcgatgtg gccaggttct gcgagcccca aagggtcaga ttttgttgga 450
 aagctatccc ctaaagtctc actgtgaatg gaccattcat gctaaacctg 500
 ggtttgtcat ccaactaaga tttgtcatgt tgagtctgga gtttgactac 550
 atgtgccagt atgactatgt tgaggttcgt gatggagaca accgcgatgg 600
 ccagatcatc aagcgtgtct gtggcaacga gcggccagct cctatccaga 650

gcataggatc ctcaactccac gtccctcttcc actccgatgg ctccaagaat 700
 tttagacggtt tccatgccat ttatgaggag atcacagcat gtcctcatc 750
 cccttgtttc catgacggca cgtgcgtcct tgacaaggct ggatcttaca 800
 agtgtgcctg cttggcaggc tataactgggc agcgtgtga aaatctcctt 850
 gaagaaagaa actgctcaga ccctgggggc ccagtcaatg ggtaccagaa 900
 aataacaggg ggccctgggc ttatcaacgg acgcatgct aaaattggca 950
 ccgtgggtgc tttcttttgt aacaactcct atgttcttag tggcaatgag 1000
 aaaagaactt gccagcagaa tggagagtgg tcagggaac agcccatctg 1050
 cataaaagcc tgccgagaac caaagatttc agacctggtg agaaggagag 1100
 ttcttccgat gcaggttcag tcaagggaga caccattaca ccagctatac 1150
 tcagcggcct tcagcaagca gaaactgcag agtgccccta ccaagaagcc 1200
 agcccttccc tttggagatc tgcccatggg ataccaacat ctgcataccc 1250
 agctccagta tgagtgcac tcacccttct accgccgcct gggcagcagc 1300
 aggaggacat gtctgaggac tgggaagtgg agtgggcggg caccatcctg 1350
 catccctatc tgccgggaaa ttgagaacat cactgctcca aagacccaag 1400
 ggttgcgctg gccgtggcag gcagccatct acaggaggac cagcggggtg 1450
 catgacggca gcctacacaa gggagcgtgg ttcttagtct gcagcgggtg 1500
 cctgggtgaat gagcgactg tgggtggtgg tgccactgt gttactgacc 1550
 tggggaaggt caccatgatc aagacagcag acctgaaagt tgttttgggg 1600
 aaattctacc gggatgatga ccgggatgag aagaccatcc agagcctaca 1650
 gatttctgct atcattctgc atcccaacta tgaccccatc ctgcttgatg 1700
 ctgacatcgc catcctgaag ctccatagaca aggcccgat cagcaccga 1750
 gtccagccca tctgcctcgc tgccagtcgg gatctcagca cttccttcca 1800
 ggagtccac atcactgtgg ctggctggaa tgtctggca gacgtgagga 1850
 gccctggctt caagaacgac aactgcgct ctggggtggt cagtgtggtg 1900
 gactcgctgc tgtgtgagga gcagcatgag gaccatggca tcccagtgag 1950
 tgtcactgat aacatgttct gtgccagctg ggaacctact gcccttctg 2000
 atatctgcac tgcagagaca ggaggcatcg cggtgtgtc cttcccgga 2050
 cgagcatctc ctgagccacg ctggcatctg atgggactgg tcagctggag 2100
 ctatgataaa acatgcagcc acaggctctc cactgccttc accaagggtg 2150
 tgccttttaa agactggatt gaaagaaata tgaaatgaac catgctcatg 2200
 cactccttga gaagtgttc tgtatatccg tctgtacgtg tgtcattgag 2250

tgaagcagtg tgggcctgaa gtgtgatttg gcctgtgaac ttggctgtgc 2300
cagggcttct gacttcaggg acaaaactca gtgaagggtg agtagacctc 2350
cattgctggt aggctgatgc cgcgtccact actaggacag ccaattggaa 2400
gatgccaggg cttgcaagaa gtaagtttct tcaaagaaga ccatatacaa 2450
aacctctcca ctccactgac ctgggtggtct tccccaactt tcagttatac 2500
gaatgccatc agcttgacca gggaagatct gggcttcacg agggcccttt 2550
tgaggctctc aagttctaga gagctgcctg tgggacagcc cagggcagca 2600
gagctgggat gtggtgcatg cctttgtgta catggccaca gtacagtctg 2650
gtccttttcc ttcccatct cttgtacaca ttttaataaa ataagggttg 2700
gcttctgaac tacaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2750
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2800
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2846

<210> 231
<211> 720
<212> PRT
<213> Homo sapiens

<400> 231
Met Glu Leu Gly Cys Trp Thr Gln Leu Gly Leu Thr Phe Leu Gln
1 5 10 15
Leu Leu Leu Ile Ser Ser Leu Pro Arg Glu Tyr Thr Val Ile Asn
20 25 30
Glu Ala Cys Pro Gly Ala Glu Trp Asn Ile Met Cys Arg Glu Cys
35 40 45
Cys Glu Tyr Asp Gln Ile Glu Cys Val Cys Pro Gly Lys Arg Glu
50 55 60
Val Val Gly Tyr Thr Ile Pro Cys Cys Arg Asn Glu Glu Asn Glu
65 70 75
Cys Asp Ser Cys Leu Ile His Pro Gly Cys Thr Ile Phe Glu Asn
80 85 90
Cys Lys Ser Cys Arg Asn Gly Ser Trp Gly Gly Thr Leu Asp Asp
95 100 105
Phe Tyr Val Lys Gly Phe Tyr Cys Ala Glu Cys Arg Ala Gly Trp
110 115 120
Tyr Gly Gly Asp Cys Met Arg Cys Gly Gln Val Leu Arg Ala Pro
125 130 135
Lys Gly Gln Ile Leu Leu Glu Ser Tyr Pro Leu Asn Ala His Cys
140 145 150
Glu Trp Thr Ile His Ala Lys Pro Gly Phe Val Ile Gln Leu Arg
155 160 165

Phe	Val	Met	Leu	Ser	Leu	Glu	Phe	Asp	Tyr	Met	Cys	Gln	Tyr	Asp	
				170					175					180	
Tyr	Val	Glu	Val	Arg	Asp	Gly	Asp	Asn	Arg	Asp	Gly	Gln	Ile	Ile	
				185					190					195	
Lys	Arg	Val	Cys	Gly	Asn	Glu	Arg	Pro	Ala	Pro	Ile	Gln	Ser	Ile	
				200					205					210	
Gly	Ser	Ser	Leu	His	Val	Leu	Phe	His	Ser	Asp	Gly	Ser	Lys	Asn	
				215					220					225	
Phe	Asp	Gly	Phe	His	Ala	Ile	Tyr	Glu	Glu	Ile	Thr	Ala	Cys	Ser	
				230					235					240	
Ser	Ser	Pro	Cys	Phe	His	Asp	Gly	Thr	Cys	Val	Leu	Asp	Lys	Ala	
				245					250					255	
Gly	Ser	Tyr	Lys	Cys	Ala	Cys	Leu	Ala	Gly	Tyr	Thr	Gly	Gln	Arg	
				260					265					270	
Cys	Glu	Asn	Leu	Leu	Glu	Glu	Arg	Asn	Cys	Ser	Asp	Pro	Gly	Gly	
				275					280					285	
Pro	Val	Asn	Gly	Tyr	Gln	Lys	Ile	Thr	Gly	Gly	Pro	Gly	Leu	Ile	
				290					295					300	
Asn	Gly	Arg	His	Ala	Lys	Ile	Gly	Thr	Val	Val	Ser	Phe	Phe	Cys	
				305					310					315	
Asn	Asn	Ser	Tyr	Val	Leu	Ser	Gly	Asn	Glu	Lys	Arg	Thr	Cys	Gln	
				320					325					330	
Gln	Asn	Gly	Glu	Trp	Ser	Gly	Lys	Gln	Pro	Ile	Cys	Ile	Lys	Ala	
				335					340					345	
Cys	Arg	Glu	Pro	Lys	Ile	Ser	Asp	Leu	Val	Arg	Arg	Arg	Val	Leu	
				350					355					360	
Pro	Met	Gln	Val	Gln	Ser	Arg	Glu	Thr	Pro	Leu	His	Gln	Leu	Tyr	
				365					370					375	
Ser	Ala	Ala	Phe	Ser	Lys	Gln	Lys	Leu	Gln	Ser	Ala	Pro	Thr	Lys	
				380					385					390	
Lys	Pro	Ala	Leu	Pro	Phe	Gly	Asp	Leu	Pro	Met	Gly	Tyr	Gln	His	
				395					400					405	
Leu	His	Thr	Gln	Leu	Gln	Tyr	Glu	Cys	Ile	Ser	Pro	Phe	Tyr	Arg	
				410					415					420	
Arg	Leu	Gly	Ser	Ser	Arg	Arg	Thr	Cys	Leu	Arg	Thr	Gly	Lys	Trp	
				425					430					435	
Ser	Gly	Arg	Ala	Pro	Ser	Cys	Ile	Pro	Ile	Cys	Gly	Lys	Ile	Glu	
				440					445					450	
Asn	Ile	Thr	Ala	Pro	Lys	Thr	Gln	Gly	Leu	Arg	Trp	Pro	Trp	Gln	
				455					460					465	
Ala	Ala	Ile	Tyr	Arg	Arg	Thr	Ser	Gly	Val	His	Asp	Gly	Ser	Leu	
				470					475					480	

His	Lys	Gly	Ala	Trp	Phe	Leu	Val	Cys	Ser	Gly	Ala	Leu	Val	Asn	485	490	495
Glu	Arg	Thr	Val	Val	Val	Ala	Ala	His	Cys	Val	Thr	Asp	Leu	Gly	500	505	510
Lys	Val	Thr	Met	Ile	Lys	Thr	Ala	Asp	Leu	Lys	Val	Val	Leu	Gly	515	520	525
Lys	Phe	Tyr	Arg	Asp	Asp	Asp	Arg	Asp	Glu	Lys	Thr	Ile	Gln	Ser	530	535	540
Leu	Gln	Ile	Ser	Ala	Ile	Ile	Leu	His	Pro	Asn	Tyr	Asp	Pro	Ile	545	550	555
Leu	Leu	Asp	Ala	Asp	Ile	Ala	Ile	Leu	Lys	Leu	Leu	Asp	Lys	Ala	560	565	570
Arg	Ile	Ser	Thr	Arg	Val	Gln	Pro	Ile	Cys	Leu	Ala	Ala	Ser	Arg	575	580	585
Asp	Leu	Ser	Thr	Ser	Phe	Gln	Glu	Ser	His	Ile	Thr	Val	Ala	Gly	590	595	600
Trp	Asn	Val	Leu	Ala	Asp	Val	Arg	Ser	Pro	Gly	Phe	Lys	Asn	Asp	605	610	615
Thr	Leu	Arg	Ser	Gly	Val	Val	Ser	Val	Val	Asp	Ser	Leu	Leu	Cys	620	625	630
Glu	Glu	Gln	His	Glu	Asp	His	Gly	Ile	Pro	Val	Ser	Val	Thr	Asp	635	640	645
Asn	Met	Phe	Cys	Ala	Ser	Trp	Glu	Pro	Thr	Ala	Pro	Ser	Asp	Ile	650	655	660
Cys	Thr	Ala	Glu	Thr	Gly	Gly	Ile	Ala	Ala	Val	Ser	Phe	Pro	Gly	665	670	675
Arg	Ala	Ser	Pro	Glu	Pro	Arg	Trp	His	Leu	Met	Gly	Leu	Val	Ser	680	685	690
Trp	Ser	Tyr	Asp	Lys	Thr	Cys	Ser	His	Arg	Leu	Ser	Thr	Ala	Phe	695	700	705
Thr	Lys	Val	Leu	Pro	Phe	Lys	Asp	Trp	Ile	Glu	Arg	Asn	Met	Lys	710	715	720

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

aggttcgtga tggagacaac cgcg 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 233
tgtcaaggac gcactgccgt catg 24

<210> 234
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 234
tggccagatc atcaagcgtg tctgtggcaa cgagcggcca gtcctatcc 50

<210> 235
<211> 1964
<212> DNA
<213> Homo sapiens

<400> 235
accaggcatt gtatcttcag ttgtcatcaa gttcgcaatc agattggaaa 50
agctcaactt gaagctttct tgccctgcagt gaagcagaga gatagatatt 100
attcacgtaa taaaaaacat gggcttcaac ctgactttcc acctttccta 150
caaattccga ttactgttgc tgttgacttt gtgcctgaca gtggttgggt 200
gggccaccag taactacttc gtgggtgccca ttcaagagat tcctaaagca 250
aaggagttca tggctaattt ccataagacc ctcatTTtTg ggaagggaaa 300
aactctgact aatgaagcat ccacgaagaa ggtagaactt gacaactgtc 350
cttctgtgtc tccttacctc agaggccaga gcaagctcat tttcaaacca 400
gatctcactt tggaagaggt acaggcagaa aatcccaaag tgtccagagg 450
ccggtatcgc cctcaggaat gtaaagcttt acagagggtc gccatcctcg 500
ttccccaccg gaacagagag aaacacctga tgtacctgct ggaacatctg 550
catcccttcc tgcagaggca gcagctggat tatggcatct acgtcatcca 600
ccaggctgaa ggtaaaaagt ttaatogagc caaactcttg aatgtgggct 650
atctagaagc cctcaaggaa gaaaattggg actgctttat attccacgat 700
gtggacctgg tacccgagaa tgactttaac ctttacaagt gtgaggagca 750
tcccagcat ctggtggttg gcaggaacag cactgggtac aggttacgtt 800
acagtggata ttttgggggt gttactgcc taagcagaga gcagtttttc 850
aagggtgaatg gattctctaa caactactgg ggatggggag gcgaagacga 900
tgacctcaga ctcagggttg agctccaaag aatgaaaatt tcccgcccc 950
tgctgaagt gggtaaatat acaatggtct tccacactag agacaaaggc 1000

aatgagggtga acgcagaacg gatgaagctc ttacaccaag tgtcacgagt 1050
ctggagaaca gatgggttga gtagttgttc ttataaatta gtatctgtgg 1100
aacacaatcc tttatatatc aacatcacag tggatttctg gtttggtgca 1150
tgaccctgga tcttttgggtg atgtttggaa gaactgattc tttgtttgca 1200
ataattttgg cctagagact tcaaatagta gcacacatta agaacctgtt 1250
acagctcatt gttgagctga atttttcctt tttgtatttt cttagcagag 1300
ctcctggtga tgtagagtat aaaacagttg taacaagaca gctttcttag 1350
tcattttgat catgaggggt aaatattgta atatggatac ttgaaggact 1400
ttatataaaa ggatgactca aaggataaaa tgaacgctat ttgaggactc 1450
tggttgaagg agatttattt aaatttgaag taatatatta tgggataaaa 1500
ggccacagga aataagactg ctgaatgtct gagagaacca gagttgttct 1550
cgtccaaggt agaaagggtac gaagatacaa tactgttatt catttctcct 1600
gtacaatcat ctgtgaagtg gtggtgtcag gtgagaaggc gtccacaaaa 1650
gaggggagaa aaggcgacga atcaggacac agtgaacttg ggaatgaaga 1700
ggtagcagga ggggtggagtg tcggctgcaa aggcagcagt agctgagctg 1750
gttcaggtg ctgatagcct tcaggggagg acctgccag gtatgccttc 1800
cagtgatgcc caccagagaa tacattctct attagttttt aaagagtttt 1850
tgtaaaatga ttttgtacaa gtaggatatg aattagcagt ttacaagttt 1900
acatattaac taataataaa tatgtctatc aaatacctct gtagtaaaat 1950
gtgaaaaagc aaaa 1964

<210> 236

<211> 344

<212> PRT

<213> Homo sapiens

<220>

<221> Signal peptide

<222> 1-27

<223> Signal peptide

<220>

<221> N-glycosylation sites

<222> 4-7, 220-223, 335-338

<223> N-glycosylation sites

<220>

<221> Xylose isomerase proteins

<222> 191-201

<223> Xylose isomerase proteins

<400> 236

Met	Gly	Phe	Asn	Leu	Thr	Phe	His	Leu	Ser	Tyr	Lys	Phe	Arg	Leu
1				5					10					15

Leu	Leu	Leu	Leu	Thr	Leu	Cys	Leu	Thr	Val	Val	Gly	Trp	Ala	Thr	
				20					25					30	
Ser	Asn	Tyr	Phe	Val	Gly	Ala	Ile	Gln	Glu	Ile	Pro	Lys	Ala	Lys	
				35					40					45	
Glu	Phe	Met	Ala	Asn	Phe	His	Lys	Thr	Leu	Ile	Leu	Gly	Lys	Gly	
				50					55					60	
Lys	Thr	Leu	Thr	Asn	Glu	Ala	Ser	Thr	Lys	Lys	Val	Glu	Leu	Asp	
				65					70					75	
Asn	Cys	Pro	Ser	Val	Ser	Pro	Tyr	Leu	Arg	Gly	Gln	Ser	Lys	Leu	
				80					85					90	
Ile	Phe	Lys	Pro	Asp	Leu	Thr	Leu	Glu	Glu	Val	Gln	Ala	Glu	Asn	
				95					100					105	
Pro	Lys	Val	Ser	Arg	Gly	Arg	Tyr	Arg	Pro	Gln	Glu	Cys	Lys	Ala	
				110					115					120	
Leu	Gln	Arg	Val	Ala	Ile	Leu	Val	Pro	His	Arg	Asn	Arg	Glu	Lys	
				125					130					135	
His	Leu	Met	Tyr	Leu	Leu	Glu	His	Leu	His	Pro	Phe	Leu	Gln	Arg	
				140					145					150	
Gln	Gln	Leu	Asp	Tyr	Gly	Ile	Tyr	Val	Ile	His	Gln	Ala	Glu	Gly	
				155					160					165	
Lys	Lys	Phe	Asn	Arg	Ala	Lys	Leu	Leu	Asn	Val	Gly	Tyr	Leu	Glu	
				170					175					180	
Ala	Leu	Lys	Glu	Glu	Asn	Trp	Asp	Cys	Phe	Ile	Phe	His	Asp	Val	
				185					190					195	
Asp	Leu	Val	Pro	Glu	Asn	Asp	Phe	Asn	Leu	Tyr	Lys	Cys	Glu	Glu	
				200					205					210	
His	Pro	Lys	His	Leu	Val	Val	Gly	Arg	Asn	Ser	Thr	Gly	Tyr	Arg	
				215					220					225	
Leu	Arg	Tyr	Ser	Gly	Tyr	Phe	Gly	Gly	Val	Thr	Ala	Leu	Ser	Arg	
				230					235					240	
Glu	Gln	Phe	Phe	Lys	Val	Asn	Gly	Phe	Ser	Asn	Asn	Tyr	Trp	Gly	
				245					250					255	
Trp	Gly	Gly	Glu	Asp	Asp	Asp	Leu	Arg	Leu	Arg	Val	Glu	Leu	Gln	
				260					265					270	
Arg	Met	Lys	Ile	Ser	Arg	Pro	Leu	Pro	Glu	Val	Gly	Lys	Tyr	Thr	
				275					280					285	
Met	Val	Phe	His	Thr	Arg	Asp	Lys	Gly	Asn	Glu	Val	Asn	Ala	Glu	
				290					295					300	
Arg	Met	Lys	Leu	Leu	His	Gln	Val	Ser	Arg	Val	Trp	Arg	Thr	Asp	
				305					310					315	
Gly	Leu	Ser	Ser	Cys	Ser	Tyr	Lys	Leu	Val	Ser	Val	Glu	His	Asn	
				320					325					330	

Pro Leu Tyr Ile Asn Ile Thr Val Asp Phe Trp Phe Gly Ala
335 340

<210> 237
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 237
ccttacctca gaggccagag caagc 25

<210> 238
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 238
gagcttcacgc cgttctgcgt tcacc 25

<210> 239
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 239
caggaatgta aagctttaca gagggtcgcc atcctcgttc cccacc 46

<210> 240
<211> 2567
<212> DNA
<213> Homo sapiens

<400> 240
cgtgggcccgg ggtcgcgcag cgggctgtgg gcgcgcccgg aggagcgacc 50
gccgcagttc tcgagctcca gctgcattcc ctccgcgtcc gccccacgct 100
tctcccgtc cgggccccgc aatggcccag gcagtgtggt cgcgcctcgg 150
ccgcacctc tggcttgctt gcctcctgcc ctgggccccg gcaggggtgg 200
ccgcaggcct gtatgaactc aatctcacca ccgatagccc tgccaccacg 250
ggagcgggtg tgaccatctc ggccagcctg gtggccaagg acaacggcag 300
cctggccctg cccgctgacg cccacctcta ccgcttcac tggatccaca 350
ccccgctggt gcttactggc aagatggaga aggtctcag ctccaccatc 400
cgtgtggtcg gccacgtgcc cggggaattc ccggtctctg tctgggtcac 450
tgccgctgac tgctggatgt gccagcctgt ggccaggggc tttgtggtcc 500
tccccatcac agagttcctc gtgggggacc ttgttgtcac ccagaacact 550

tccctaccct ggcccagctc ctatctcact aagaccgtcc tgaaagtctc 600
 ctctctcctc cacgacccga gcaacttcct caagaccgcc ttgtttctct 650
 acagctggga ctctggggac gggacccaga tgggtgactga agactccgtg 700
 gtctattata actattccat catcgggacc ttcaccgtga agctcaaagt 750
 ggtggcggag tgggaagagg tggagccgga tgccacgagg gctgtgaagc 800
 agaagaccgg ggacttctcc gctcgtctga agctgcagga aacccttcga 850
 ggcatccaag tggtggggcc caccctaatt cagaccttcc aaaagatgac 900
 cgtgaccttg aacttctctg ggagccctcc tctgactgtg tgctggcgctc 950
 tcaagcctga gtgcctcccg ctggaggaag gggagtgcc aacctgtgtcc 1000
 gtggccagca cagcgtacaa cctgacccac accttcagg accctgggga 1050
 ctactgcttc agcatccggg ccgagaatat catcagcaag acacatcagt 1100
 accacaagat ccagggtgtg cctccagaa tccagccggc tgtctttgct 1150
 ttcccatgtg ctacacttat cactgtgatg ttggccttca tcatgtacat 1200
 gacctgcgg aatgccactc agcaaaagga catggtggag aaccgggagc 1250
 caccctctgg ggtcagggtc tgctgccaga tgtgctgtgg gcctttcttg 1300
 ctggagactc catctgagta cctggaaatt gttcgtgaga accacgggct 1350
 gctcccgccc ctctataagt ctgtcaaac ttacaccgtg tgagcactcc 1400
 cctcccccac cccatctcag tggttaactga ctgctgactt ggagtttcca 1450
 gcagggtggt gtgcaccact gaccaggagg ggttcatttg cgtggggctg 1500
 ttggcctgga tcatccatcc atctgtacag ttcagccact gccacaagcc 1550
 cctccctctc tgtcaccctc gacccagcc attcaccat ctgtacagtc 1600
 cagccactga cataagcccc actcggttac caccctcttg acccctacc 1650
 tttgaagagg ctctgtgcag gactttgatg cttgggggtg tccgtgttga 1700
 ctctaggtg ggctggctg cccactgcc attcctctca tattggcaca 1750
 tctgctgtcc attgggggtt ctgagtttc tccccagac agccctacct 1800
 gtgccagaga gctagaaaaga aggtcataaa ggggttaaaa tccataacta 1850
 aaggtgttac acatagatgg gcacactcac agagagaagt gtgcatgtac 1900
 acacaccaca cacacacaca cacacacaca cacagaaata taaacacatg 1950
 cgtcacatgg gcatttcaga tgatcagctc tgtatctggt taagtcgggt 2000
 gctgggatgc acctgcact agagctgaaa ggaaatttga cctccaagca 2050
 gccctgacag gttctgggcc cgggccctcc ctttgtgctt tgtctctgca 2100
 gttcttgcc cctttataag gccatcctag tccctgctgg ctggcagggg 2150

Tyr	Asn	Tyr	Ser	Ile	Ile	Gly	Thr	Phe	Thr	Val	Lys	Leu	Lys	Val	200	205	210
Val	Ala	Glu	Trp	Glu	Glu	Val	Glu	Pro	Asp	Ala	Thr	Arg	Ala	Val	215	220	225
Lys	Gln	Lys	Thr	Gly	Asp	Phe	Ser	Ala	Ser	Leu	Lys	Leu	Gln	Glu	230	235	240
Thr	Leu	Arg	Gly	Ile	Gln	Val	Leu	Gly	Pro	Thr	Leu	Ile	Gln	Thr	245	250	255
Phe	Gln	Lys	Met	Thr	Val	Thr	Leu	Asn	Phe	Leu	Gly	Ser	Pro	Pro	260	265	270
Leu	Thr	Val	Cys	Trp	Arg	Leu	Lys	Pro	Glu	Cys	Leu	Pro	Leu	Glu	275	280	285
Glu	Gly	Glu	Cys	His	Pro	Val	Ser	Val	Ala	Ser	Thr	Ala	Tyr	Asn	290	295	300
Leu	Thr	His	Thr	Phe	Arg	Asp	Pro	Gly	Asp	Tyr	Cys	Phe	Ser	Ile	305	310	315
Arg	Ala	Glu	Asn	Ile	Ile	Ser	Lys	Thr	His	Gln	Tyr	His	Lys	Ile	320	325	330
Gln	Val	Trp	Pro	Ser	Arg	Ile	Gln	Pro	Ala	Val	Phe	Ala	Phe	Pro	335	340	345
Cys	Ala	Thr	Leu	Ile	Thr	Val	Met	Leu	Ala	Phe	Ile	Met	Tyr	Met	350	355	360
Thr	Leu	Arg	Asn	Ala	Thr	Gln	Gln	Lys	Asp	Met	Val	Glu	Asn	Pro	365	370	375
Glu	Pro	Pro	Ser	Gly	Val	Arg	Cys	Cys	Cys	Gln	Met	Cys	Cys	Gly	380	385	390
Pro	Phe	Leu	Leu	Glu	Thr	Pro	Ser	Glu	Tyr	Leu	Glu	Ile	Val	Arg	395	400	405
Glu	Asn	His	Gly	Leu	Leu	Pro	Pro	Leu	Tyr	Lys	Ser	Val	Lys	Thr	410	415	420

Tyr Thr Val

<210> 242

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 242

catttcctta ccctggaccc agctcc 26

<210> 243

<211> 25

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 243
gaaaggccca cagcacatct ggcag 25

<210> 244
<211> 46
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 244
ccacgaccgc agcaacttcc tcaagaccga cttgtttctc tacagc 46

<210> 245
<211> 485
<212> DNA
<213> Homo sapiens

<400> 245
gctcaagacc cagcagtggg acagccagac agacggcacg atggcactga 50
gctcccagat ctgggccgct tgcctcctgc tctcctcct cctcgccagc 100
ctgaccagtg gctctgtttt ccacacaacag acgggacaac ttgcagagct 150
gcaaccccag gacagagctg gagccagggc cagctggatg cccatgttcc 200
agaggcgaag gaggcgagac acccaacttcc ccatctgcat tttctgctgc 250
ggctgctgtc atcgatcaaa gtgtgggatg tgctgcaaga cgtagaacct 300
acctgccctg cccccgtccc ctcccttctt tatttattcc tgctgccccca 350
gaacataggt cttggaataa aatggctggg tcttttgttt tccccaaaaa 400
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 450
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 485

<210> 246
<211> 84
<212> PRT
<213> Homo sapiens

<400> 246
Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu
1 5 10 15
Leu Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln
20 25 30
Thr Gly Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala
35 40 45
Arg Ala Ser Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp
50 55 60
Thr His Phe Pro Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg
65 70 75

Ser Lys Cys Gly Met Cys Cys Lys Thr
80

<210> 247
<211> 2359
<212> DNA
<213> Homo sapiens

<400> 247
ctgtcaggaa ggaccatctg aaggtgcaa tttgttctta gggaggcagg 50
tgctggcctg gcctggatct tccaccatgt tcctgttgct gccttttgat 100
agcctgattg tcaaccttct gggcatctcc ctgactgtcc tcttcaccct 150
ccttctcggt ttcatcatag tgccagccat ttttgagtc tcctttggtg 200
tccgcaaact ctacatgaaa agtctgttaa aaatctttgc gtgggctacc 250
ttgagaatgg agcgaggagc caaggagaag aaccaccagc tttacaagcc 300
ctacaccaac ggaatcattg caaaggatcc cacttcaacta gaagaagaga 350
tcaaagagat tcgtcgaagt ggtagtagta aggctctgga caacactcca 400
gagttcgagc tctctgacat tttctacttt tgccggaaag gaatggagac 450
cattatggat gatgaggtga caaagagatt ctgagcagaa gaactggagt 500
cctggaacct gctgagcaga accaattata acttccagta catcagcctt 550
cggctcacgg tcctgtgggg gttaggagtg ctgattcggg actgctttct 600
gctgccgctc aggatagcac tggctttcac agggattagc cttctggtgg 650
tgggcacaac tgtggtggga tacttgccaa atgggaggtt taaggaattc 700
atgagtaaac atgttcactt aatgtgttac cggatctgcg tgcgagcgct 750
gacagccatc atcacctacc atgacagga aaacagacca agaaatggtg 800
gcatctgtgt ggccaatcat acctcaccga tcgatgtgat catcttgccc 850
agcgatggct attatgcat ggtgggtcaa gtgcacgggg gactcatggg 900
tgtgattcag agagccatgg tgaaggcctg cccacacgtc tggtttgagc 950
gctcggaagt gaaggatcgc cacctggtgg ctaagagact gactgaacat 1000
gtgcaagata aaagcaagct gcctatcctc atcttccag aaggaacctg 1050
catcaataat acatcgggtg tgatgttcaa aaaggaagt tttgaaattg 1100
gagccacagt ttacctgtt gctatcaagt atgacctca atttggcgat 1150
gccttctgga acagcagcaa atacgggatg gtgacgtacc tgctgcgaat 1200
gatgaccagc tgggccattg tctgcagcgt gtggtacctg cctcccatga 1250
ctagagaggc agatgaagat gctgtccagt ttgcgaatag ggtgaaatct 1300
gccattgcc a ggaggagg acttgtggac ctgctgtggg atgggggcct 1350

gaagagggag aaggtgaagg acacgttcaa ggaggagcag cagaagctgt 1400
acagcaagat gatcgtgggg aaccacaagg acaggagccg ctcttgagcc 1450
tgcctccagc tggctggggc caccgtgcgg ggtgccaaacg ggctcagagc 1500
tggagttgcc gccgcgccc ccaactgctgt gtcctttcca gactccaggg 1550
ctccccgggc tgctctggat ccaggactc cggttttcgc cgagccgcag 1600
cgggatccct gtgcacccgg cgcagcctac ccttggtggt ctaaaccgat 1650
gctgctgggt gttgcgaccc aggaacgagat gccttgtttc tttacaata 1700
agtcgttga ggaatgccat taaagtgaac tccccacctt tgcacgctgt 1750
gcgggctgag tggttgggga gatgtggcca tggctctgtg ctagagatgg 1800
cgttacaaga gtctgttatg caagcccggtg tgccagggat gtgctggggg 1850
cggccacccg ctctccagga aaggcacagc tgaggcactg tggctggctt 1900
cggcctcaac atcgcccca gccttgagc tctgcagaca tgataggaag 1950
gaaactgtca tctgcagggg ctttcagcaa aatgaagggt tagattttta 2000
tgctgctgct gatgggggta ctaaaggag ggaagaggc cagggtgggc 2050
gctgactggg ccatggggag aacgtgtgtt cgtactccag gctaaccctg 2100
aactcccat gtgatgcgcg ctttggtgaa tgtgtgtctc ggtttcccca 2150
tctgtaatat gagtcggggg gaatggtggt gattcctacc tcacagggct 2200
gttggtgggga ttaaagtgtc gcgggtgagt gaaggacaca tcacgttcag 2250
tgtttcaagt acaggcccac aaaacggggc acggcaggcc tgagctcaga 2300
gctgctgcac tgggctttgg atttggtcct gtgagtaaataaaaactggct 2350
ggtgaatga 2359

<210> 248

<211> 456

<212> PRT

<213> Homo sapiens

<400> 248

Met	Phe	Leu	Leu	Leu	Pro	Phe	Asp	Ser	Leu	Ile	Val	Asn	Leu	Leu
1				5					10					15

Gly	Ile	Ser	Leu	Thr	Val	Leu	Phe	Thr	Leu	Leu	Leu	Val	Phe	Ile
				20					25					30

Ile	Val	Pro	Ala	Ile	Phe	Gly	Val	Ser	Phe	Gly	Ile	Arg	Lys	Leu
				35					40					45

Tyr	Met	Lys	Ser	Leu	Leu	Lys	Ile	Phe	Ala	Trp	Ala	Thr	Leu	Arg
				50					55					60

Met	Glu	Arg	Gly	Ala	Lys	Glu	Lys	Asn	His	Gln	Leu	Tyr	Lys	Pro
				65					70					75

Tyr	Thr	Asn	Gly	Ile	Ile	Ala	Lys	Asp	Pro	Thr	Ser	Leu	Glu	Glu		80	85	90
Glu	Ile	Lys	Glu	Ile	Arg	Arg	Ser	Gly	Ser	Ser	Lys	Ala	Leu	Asp		95	100	105
Asn	Thr	Pro	Glu	Phe	Glu	Leu	Ser	Asp	Ile	Phe	Tyr	Phe	Cys	Arg		110	115	120
Lys	Gly	Met	Glu	Thr	Ile	Met	Asp	Asp	Glu	Val	Thr	Lys	Arg	Phe		125	130	135
Ser	Ala	Glu	Glu	Leu	Glu	Ser	Trp	Asn	Leu	Leu	Ser	Arg	Thr	Asn		140	145	150
Tyr	Asn	Phe	Gln	Tyr	Ile	Ser	Leu	Arg	Leu	Thr	Val	Leu	Trp	Gly		155	160	165
Leu	Gly	Val	Leu	Ile	Arg	Tyr	Cys	Phe	Leu	Leu	Pro	Leu	Arg	Ile		170	175	180
Ala	Leu	Ala	Phe	Thr	Gly	Ile	Ser	Leu	Leu	Val	Val	Gly	Thr	Thr		185	190	195
Val	Val	Gly	Tyr	Leu	Pro	Asn	Gly	Arg	Phe	Lys	Glu	Phe	Met	Ser		200	205	210
Lys	His	Val	His	Leu	Met	Cys	Tyr	Arg	Ile	Cys	Val	Arg	Ala	Leu		215	220	225
Thr	Ala	Ile	Ile	Thr	Tyr	His	Asp	Arg	Glu	Asn	Arg	Pro	Arg	Asn		230	235	240
Gly	Gly	Ile	Cys	Val	Ala	Asn	His	Thr	Ser	Pro	Ile	Asp	Val	Ile		245	250	255
Ile	Leu	Ala	Ser	Asp	Gly	Tyr	Tyr	Ala	Met	Val	Gly	Gln	Val	His		260	265	270
Gly	Gly	Leu	Met	Gly	Val	Ile	Gln	Arg	Ala	Met	Val	Lys	Ala	Cys		275	280	285
Pro	His	Val	Trp	Phe	Glu	Arg	Ser	Glu	Val	Lys	Asp	Arg	His	Leu		290	295	300
Val	Ala	Lys	Arg	Leu	Thr	Glu	His	Val	Gln	Asp	Lys	Ser	Lys	Leu		305	310	315
Pro	Ile	Leu	Ile	Phe	Pro	Glu	Gly	Thr	Cys	Ile	Asn	Asn	Thr	Ser		320	325	330
Val	Met	Met	Phe	Lys	Lys	Gly	Ser	Phe	Glu	Ile	Gly	Ala	Thr	Val		335	340	345
Tyr	Pro	Val	Ala	Ile	Lys	Tyr	Asp	Pro	Gln	Phe	Gly	Asp	Ala	Phe		350	355	360
Trp	Asn	Ser	Ser	Lys	Tyr	Gly	Met	Val	Thr	Tyr	Leu	Leu	Arg	Met		365	370	375
Met	Thr	Ser	Trp	Ala	Ile	Val	Cys	Ser	Val	Trp	Tyr	Leu	Pro	Pro		380	385	390

Met	Thr	Arg	Glu	Ala	Asp	Glu	Asp	Ala	Val	Gln	Phe	Ala	Asn	Arg	395	400	405
Val	Lys	Ser	Ala	Ile	Ala	Arg	Gln	Gly	Gly	Leu	Val	Asp	Leu	Leu	410	415	420
Trp	Asp	Gly	Gly	Leu	Lys	Arg	Glu	Lys	Val	Lys	Asp	Thr	Phe	Lys	425	430	435
Glu	Glu	Gln	Gln	Lys	Leu	Tyr	Ser	Lys	Met	Ile	Val	Gly	Asn	His	440	445	450
Lys	Asp	Arg	Ser	Arg	Ser										455		

<210> 249

<211> 1103

<212> DNA

<213> Homo sapiens

<400> 249

```

gcccctcgaa accaggactc cagcacctct ggtcccgccc tcacccggac 50
ccctggccct cacgtctcct ccagggatgg cgctggcggc tttgatgata 100
gccctcggca gcctcggcct ccacacctgg caggcccagg ctgttcccac 150
catcctgccc ctgggccttg ctccagacac ctttgacgat acctatgttg 200
gttgtgcaga ggagatggag gagaaggcag cccccctgct aaaggaggaa 250
atggcccacc atgccttgct gcgggaatcc tgggaggcag ccaggagac 300
ctgggaggac aagcgtcgag ggcttacctt gccccctggc ttcaaagccc 350
agaatggaat agccattatg gtctacacca actcatogaa caccttgtac 400
tgggagttga atcaggccgt gcggacgggc ggaggctccc gggagctcta 450
catgaggcac tttcccttca aggccctgca tttctacctg atccggggccc 500
tgcagctgct gcgaggcagt gggggctgca gcaggggacc tggggagggtg 550
gtgttccgag gtgtgggcag ccttcgcttt gaacccaaga ggctggggga 600
ctctgtccgc ttgggccagt ttgcctccag ctccctggat aaggcagtgg 650
cccacagatt tggggagaag aggcggggct gtgtgtctgc gccaggggtg 700
cagctagggt cacaatctga gggggcctcc tctctgcccc cctggaagac 750
tctgtctctt gccctggag agttccagct ctccggggtt gggccctgaa 800
agtccaacat ctgccactta ggagccctgg gaacgggtga ccttcatatg 850
acgaagaggc acctccagca gccttgagaa gcaagaacat ggttcoggac 900
ccagccctag cagccttctc cccaaccagg atgttggcct ggggaggcca 950
cagcagggtg gagggaaact tgctatgtga tggggacttc ctgggacaag 1000
caaggaaagt actgaggcag ccacttgatt gaacggtgtt gcaatgtgga 1050

```

gacatggagt tttattgagg tagctacgtg attaaatggt attgcagtgt 1100

gga 1103

<210> 250

<211> 240

<212> PRT

<213> Homo sapiens

<400> 250

Met Ala Leu Ala Ala Leu Met Ile Ala Leu Gly Ser Leu Gly Leu
1 5 10 15

His Thr Trp Gln Ala Gln Ala Val Pro Thr Ile Leu Pro Leu Gly
20 25 30

Leu Ala Pro Asp Thr Phe Asp Asp Thr Tyr Val Gly Cys Ala Glu
35 40 45

Glu Met Glu Glu Lys Ala Ala Pro Leu Leu Lys Glu Glu Met Ala
50 55 60

His His Ala Leu Leu Arg Glu Ser Trp Glu Ala Ala Gln Glu Thr
65 70 75

Trp Glu Asp Lys Arg Arg Gly Leu Thr Leu Pro Pro Gly Phe Lys
80 85 90

Ala Gln Asn Gly Ile Ala Ile Met Val Tyr Thr Asn Ser Ser Asn
95 100 105

Thr Leu Tyr Trp Glu Leu Asn Gln Ala Val Arg Thr Gly Gly Gly
110 115 120

Ser Arg Glu Leu Tyr Met Arg His Phe Pro Phe Lys Ala Leu His
125 130 135

Phe Tyr Leu Ile Arg Ala Leu Gln Leu Leu Arg Gly Ser Gly Gly
140 145 150

Cys Ser Arg Gly Pro Gly Glu Val Val Phe Arg Gly Val Gly Ser
155 160 165

Leu Arg Phe Glu Pro Lys Arg Leu Gly Asp Ser Val Arg Leu Gly
170 175 180

Gln Phe Ala Ser Ser Ser Leu Asp Lys Ala Val Ala His Arg Phe
185 190 195

Gly Glu Lys Arg Arg Gly Cys Val Ser Ala Pro Gly Val Gln Leu
200 205 210

Gly Ser Gln Ser Glu Gly Ala Ser Ser Leu Pro Pro Trp Lys Thr
215 220 225

Leu Leu Leu Ala Pro Gly Glu Phe Gln Leu Ser Gly Val Gly Pro
230 235 240

<210> 251

<211> 50

<212> DNA

<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 251
ccaccacctg gaggtcctgc agttgggcag gaactccatc cggcagattg 50

<210> 252

<211> 1076

<212> DNA

<213> Homo sapiens

<400> 252
gtgggttcat ttcagtggct gacttccaga gagcaatatg gctgggtccc 50
caacatgcct caccctcatc tatatccttt ggcagctcac agggtcagca 100
gcctctggac ccgtgaaaga gctggtcggt tccgttgggtg gggccgtgac 150
tttccccctg aagtccaaag taaagcaagt tgactctatt gtctggacct 200
tcaacacaac ccctcttgtc accatacagc cagaaggggg cactatcata 250
gtgacccaaa atcgtaatag ggagagagta gacttcccag atggaggcta 300
ctccctgaag ctgagcaaac tgaagaagaa tgactcaggg atctactatg 350
tggggatata cagctcatca ctccagcagc cctccacca ggagtacgtg 400
ctgcatgtct acgagcacct gtcaaagcct aaagtcacca tgggtctgca 450
gagcaataag aatggcacct gtgtgaccaa totgacatgc tgcattgaac 500
atggggaaga ggatgtgatt tatacctgga aggcctggg gcaagcagcc 550
aatgagtcct ataattgggtc catcctcccc atctcctgga gatggggaga 600
aagtgatatg accttcatct gcgttgccag gaacctgtc agcagaaact 650
tctcaagccc catccttgcc aggaagctct gtgaagggtg tgctgatgac 700
ccagattcct ccattggcct cctgtgtctc ctggttggtg ccctcctgct 750
cagtctcttt gtactggggc tatttctttg gtttctgaag agagagagac 800
aagaagagta cattgaagag aagaagagag tggacatttg tcgggaaact 850
cctaacatat gccccattc tggagagaac acagagtacg acacaatccc 900
tcacactaat agaacaatcc taaaggaaga tccagcaaat acggtttact 950
ccactgtgga aataccgaaa aagatggaaa atccccactc actgctcacg 1000
atgccagaca caccaaggct atttgctat gagaatgtta tctagacagc 1050
agtgcactcc cctaagtctc tgctca 1076

<210> 253

<211> 335

<212> PRT

<213> Homo sapiens

<400> 253

Met Ala Gly Ser Pro Thr Cys Leu Thr Leu Ile Tyr Ile Leu Trp

320

325

330

Tyr Glu Asn Val Ile
335

<210> 254

<211> 1053

<212> DNA

<213> Homo sapiens

<400> 254

```

ctggttcccc aacatgcctc accctcatct atatcctttg gcagtcaca 50
gggtcagcag cctctggacc cgtgaaagag ctggtcgggt ccgttggtgg 100
ggcctgact ttccccctga agtccaaagt aaagcaagtt gactctattg 150
tctggacctt caacacaacc cctcttgtca ccatacagcc agaagggggc 200
actatcatag tgacccaaaa tcgtaatagg gagagagtag acttcccaga 250
tggaggctac tccctgaagc tcagcaaact gaagaagaat gactcaggga 300
tctactatgt ggggatatac agctcatcac tccagcagcc ctccaccag 350
gagtacgtgc tgcattgcta cgagcacctg tcaaagccta aagtcacat 400
gggtctgcag agcaataaga atggcacctg tgtgaccaat ctgacatgct 450
gcatggaaca tggggaagag gatgtgattt atacctggaa ggccctgggg 500
caagcagcca atgagtccca taatgggtcc atcctcccca tctcctggag 550
atggggagaa agtgatatga ccttcatctg cgttgccagg aaccctgtca 600
gcagaaactt ctcaagcccc atccttgcca ggaagctctg tgaagggtgt 650
gctgatgacc cagattcctc catggtcctc ctgtgtctcc tgttggtgcc 700
cctcctgtc agtctctttg tactgggggt atttcttttg tttctgaaga 750
gagagagaca agaagagtac attgaagaga agaagagagt ggacatttgt 800
cgggaaactc ctaacatatg cccccattct ggagagaaca cagagtacga 850
cacaatccct cacactaata gaacaatcct aaaggaagat ccagcaaata 900
cggtttactc cactgtggaa ataccgaaaa agatggaaaa tccccactca 950
ctgctcacga tgccagacac accaaggcta tttgcctatg agaatgttat 1000
ctagacagca gtgcactccc ctaagtctct gctcaaaaaa aaaaaaaaaa 1050
aaa 1053

```

<210> 255

<211> 860

<212> DNA

<213> Homo sapiens

<400> 255

```

gaaagacgtg gtcttgacag acagacaatc ctattoccta ccaaaatgaa 50

```

gatgctgctg ctgctgtggt tgggactgac cctagtctgt gtccatgcag 100
aagaagctag ttctacggga aggaacttta atgtagaaaa gattaatggg 150
gaatggcata ctattatcct ggcctctgac aaaagagaaa agatagaaga 200
acatggcaac tttagacttt ttctggagca aatccatgtc ttggagaatt 250
ccttagttct taaagtccat actgtaagag atgaagagtg ctccgaatta 300
tctatgggtg ctgacaaaac agaaaaggct ggtgaatatt ctgtgacgta 350
tgatggattc aatacattta ctatacctaa gacagactat gataactttc 400
ttatggctca cctcattaac gaaaaggatg gggaaacctt ccagctgatg 450
gggctctatg gccgagaacc agatttgagt tcagacatca aggaaagggt 500
tgcacaacta tgtgaggagc atggaatcct tagagaaaat atcattgacc 550
tatccaatgc caatcgctgc ctccaggccc gagaatgaag aatggcctga 600
gcctccagtg ttgagtggac acttctcacc aggactccac catcatccct 650
tcctatccat acagcatccc cagtataaat tctgtgatct gcattccatc 700
ctgtctcact gagaagtcca attccagtct atcaacatgt tacctaggat 750
acctcatcaa gaatcaaaga cttcttttaa tttctctttg atacaccctt 800
gacaattttt catgaaatta ttctcttccc tgttcaataa atgattaccc 850
ttgcacttaa 860

<210> 256

<211> 180

<212> PRT

<213> Homo sapiens

<400> 256

Met	Lys	Met	Leu	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Thr	Leu	Val	Cys
1				5					10					15
Val	His	Ala	Glu	Glu	Ala	Ser	Ser	Thr	Gly	Arg	Asn	Phe	Asn	Val
			20						25					30
Glu	Lys	Ile	Asn	Gly	Glu	Trp	His	Thr	Ile	Ile	Leu	Ala	Ser	Asp
			35						40					45
Lys	Arg	Glu	Lys	Ile	Glu	Glu	His	Gly	Asn	Phe	Arg	Leu	Phe	Leu
			50						55					60
Glu	Gln	Ile	His	Val	Leu	Glu	Asn	Ser	Leu	Val	Leu	Lys	Val	His
			65						70					75
Thr	Val	Arg	Asp	Glu	Glu	Cys	Ser	Glu	Leu	Ser	Met	Val	Ala	Asp
			80						85					90
Lys	Thr	Glu	Lys	Ala	Gly	Glu	Tyr	Ser	Val	Thr	Tyr	Asp	Gly	Phe
			95						100					105
Asn	Thr	Phe	Thr	Ile	Pro	Lys	Thr	Asp	Tyr	Asp	Asn	Phe	Leu	Met
			110						115					120

Ala	His	Leu	Ile	Asn	Glu	Lys	Asp	Gly	Glu	Thr	Phe	Gln	Leu	Met
				125					130					135
Gly	Leu	Tyr	Gly	Arg	Glu	Pro	Asp	Leu	Ser	Ser	Asp	Ile	Lys	Glu
				140					145					150
Arg	Phe	Ala	Gln	Leu	Cys	Glu	Glu	His	Gly	Ile	Leu	Arg	Glu	Asn
				155					160					165
Ile	Ile	Asp	Leu	Ser	Asn	Ala	Asn	Arg	Cys	Leu	Gln	Ala	Arg	Glu
				170					175					180

<210> 257
 <211> 766
 <212> DNA
 <213> Homo sapiens

<400> 257
 ggctcgagcg tttctgagcc aggggtgacc atgacctgct gcgaaggatg 50
 gacatcctgc aatggattca gcctgctggt tctactgctg ttaggagtag 100
 ttctcaatgc gatacctcta attgtcagct tagttgagga agaccaatth 150
 tctcaaaacc ccatctcttg ctttgagtgg tggttcccag gaattatagg 200
 agcaggctctg atggccattc cagcaacaac aatgtccttg acagcaagaa 250
 aaagagcgtg ctgcaacaac agaactggaa tgtttctttc atcatttttc 300
 agtgtgatca cagtcattgg tgctctgtat tgcattgctga tatccatcca 350
 ggctctctta aaaggctctc tcatgtgtaa ttctccaagc aacagtaatg 400
 ccaattgtga attttcattg aaaaacatca gtgacattca tccagaatcc 450
 ttcaacttgc agtggttttt caatgactct tgtgcacctc ctactgggtt 500
 caataaacc accagtaacg acaccatggc gagtggctgg agagcatcta 550
 gtttccactt cgattctgaa gaaaacaaac ataggcttat ccacttctca 600
 gtatttttag gtctattgct tgttggaatt ctggagggtcc tgtttgggct 650
 cagtcagata gtcacggtt tcttggtgctg tctgtgtgga gtctctaagc 700
 gaagaagtca aattgtgtag tttaatggga ataaaatgta agtatcagta 750
 gtttgaaaaa aaaaaa 766

<210> 258
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 258
 Met Thr Cys Cys Glu Gly Trp Thr Ser Cys Asn Gly Phe Ser Leu
 1 5 10 15
 Leu Val Leu Leu Leu Leu Gly Val Val Leu Asn Ala Ile Pro Leu
 20 25 30
 Ile Val Ser Leu Val Glu Glu Asp Gln Phe Ser Gln Asn Pro Ile

tcaacacggtt gctttaataa atcacttgcc ctgc 434

<210> 260

<211> 83

<212> PRT

<213> Homo sapiens

<400> 260

Met Arg Leu Ser Val Cys Leu Leu Met Val Ser Leu Ala Leu Cys
1 5 10 15

Cys Tyr Gln Ala His Ala Leu Val Cys Pro Ala Val Ala Ser Glu
20 25 30

Ile Thr Val Phe Leu Phe Leu Ser Asp Ala Ala Val Asn Leu Gln
35 40 45

Val Ala Lys Leu Asn Pro Pro Pro Glu Ala Leu Ala Ala Lys Leu
50 55 60

Glu Val Lys His Cys Thr Asp Gln Ile Ser Phe Lys Lys Arg Leu
65 70 75

Ser Leu Lys Lys Ser Trp Trp Lys
80

<210> 261

<211> 636

<212> DNA

<213> Homo sapiens

<400> 261

atccgttctc tgcgctgcc a gctcaggtga gccctcgcca aggtgacctc 50

gcaggacact ggtgaaggag cagtgaggaa cctgcagagt cacacagttg 100

ctgaccaatt gagctgtgag cctggagcag atccgtgggc tgcagacccc 150

cgccccagt cctctcccc tgcagccctg cccctcgaac tgtgacatgg 200

agagagtgc cctggccctt ctctactgg caggcctgac tgccttgga 250

gccaatgacc catttgccaa taaagacgat cccttctact atgactggaa 300

aaacctgcag ctgagcggac tgatctgcgg agggctcctg gccattgctg 350

ggatcgcggc agttctgagt ggcaaatgca aatacaagag cagccagaag 400

cagcacagtc ctgtacctga gaaggccatc ccaactcatca ctccaggctc 450

tgccactact tgctgagcac aggactggcc tccagggatg gcctgaagcc 500

taacactggc cccagcacc tcctcccctg ggaggcctta tcctcaagga 550

aggacttctc tccaagggca ggctgttagg cccctttctg atcaggaggc 600

ttctttatga attaaactcg cccaccacc cctca 636

<210> 262

<211> 89

<212> PRT

<213> Homo sapiens

<400> 262

Met Glu Arg Val Thr Leu Ala Leu Leu Leu Leu Ala Gly Leu Thr
1 5 10 15
Ala Leu Glu Ala Asn Asp Pro Phe Ala Asn Lys Asp Asp Pro Phe
20 25 30
Tyr Tyr Asp Trp Lys Asn Leu Gln Leu Ser Gly Leu Ile Cys Gly
35 40 45
Gly Leu Leu Ala Ile Ala Gly Ile Ala Ala Val Leu Ser Gly Lys
50 55 60
Cys Lys Tyr Lys Ser Ser Gln Lys Gln His Ser Pro Val Pro Glu
65 70 75
Lys Ala Ile Pro Leu Ile Thr Pro Gly Ser Ala Thr Thr Cys
80 85

<210> 263

<211> 1676

<212> DNA

<213> Homo sapiens

<400> 263

ggagaagagg ttgtgtggga caagctgctc cgcacagaag gatgtcgctg 50
ctgagcctgc cctggctggg cctcagaccg gtggcaatgt ccccatggct 100
actcctgctg ctggttgttg gctcctgggt actcgccgcg atcctggctt 150
ggacctatgc cttctataac aactgccgcc ggctccagtg tttcccacag 200
cccccaaac ggaactgggt ttgggggtcac ctgggcctga tcaactctac 250
agaggagggc ttgaaggact cgaccagat gtcggccacc tattcccagg 300
gctttacggt atggctgggt cccatcatcc ccttcacgtg tttatgccac 350
cctgacacca tccggtctat caccaatgcc tcagotgcc tggcacccaa 400
ggataatctc ttcacaggt tccatgaagc ctggctggga gaaggatac 450
tgctgagtgg cggtgacaag tggagccgcc accgtcggat gctgacgccc 500
gccttccatt tcaacatcct gaagtccat ataacgatct tcaacaagag 550
tgcaaacatc atgcttgaca agtggcagca cctggcctca gagggcagca 600
gtcgtctgga catgtttgag cacatcagcc tcatgacctt ggacagtcta 650
cagaaatgca tcttcagctt tgacagccat tgtcaggaga ggcccagtga 700
atatattgcc accatcttgg agctcagtg ccttgtagag aaaagaagcc 750
agcatatcct ccagcacatg gactttctgt attacctct ccatgacggg 800
cggcgcttcc acagggcctg ccgcctgggt catgacttca cagacgctgt 850
catccggggag cggcgtcgca cctcccccac tcagggtatt gatgattttt 900
tcaaagacaa agccaagtcc aagacttttg atttcattga tgtgcttctg 950

ctgagcaagg atgaagatgg gaaggcattg tcagatgagg atataagagc 1000
 agaggctgac accttcatgt ttggaggcca tgacaccacg gccagtggcc 1050
 tctcctgggt cctgtacaac cttgcgaggg acccagaata ccaggagcgc 1100
 tgccgacagg aggtgcaaga gcttctgaag gaccgcatc ctaaagagat 1150
 tgaatgggac gacctggccc agctgccctt cctgaccatg tgcgtgaagg 1200
 agagcctgag gttacatccc ccagctccct tcatctcccg atgctgcacc 1250
 caggacattg ttctcccaga tggccgagtc atccccaaag gcattacctg 1300
 cctcatcgat attatagggg tccatcacia cccaactgtg tggccggatc 1350
 ctgaggtcta cgacccttc cgctttgacc cagagaacag caaggggagg 1400
 tcacctctgg cttttattcc tttctccga gggcccagga actgcatcgg 1450
 gcaggcgttc gccatggcgg agatgaaagt ggtcctggcg ttgatgctgc 1500
 tgcacttccg gttcctgcca gaccacactg agccccgcag gaagctggaa 1550
 ttgatcatgc gcgccgaggg cgggctttgg ctgcgggtgg agcccctgaa 1600
 tgtaggcttg cagtgacttt ctgaccatc cacctgtttt tttgcagatt 1650
 gtcatgaata aaacggtgct gtcaaa 1676

<210> 264

<211> 524

<212> PRT

<213> Homo sapiens

<400> 264

Met	Ser	Leu	Leu	Ser	Leu	Pro	Trp	Leu	Gly	Leu	Arg	Pro	Val	Ala
1				5					10					15
Met	Ser	Pro	Trp	Leu	Leu	Leu	Leu	Leu	Val	Val	Gly	Ser	Trp	Leu
				20					25					30
Leu	Ala	Arg	Ile	Leu	Ala	Trp	Thr	Tyr	Ala	Phe	Tyr	Asn	Asn	Cys
				35					40					45
Arg	Arg	Leu	Gln	Cys	Phe	Pro	Gln	Pro	Pro	Lys	Arg	Asn	Trp	Phe
				50					55					60
Trp	Gly	His	Leu	Gly	Leu	Ile	Thr	Pro	Thr	Glu	Glu	Gly	Leu	Lys
				65					70					75
Asp	Ser	Thr	Gln	Met	Ser	Ala	Thr	Tyr	Ser	Gln	Gly	Phe	Thr	Val
				80					85					90
Trp	Leu	Gly	Pro	Ile	Ile	Pro	Phe	Ile	Val	Leu	Cys	His	Pro	Asp
				95					100					105
Thr	Ile	Arg	Ser	Ile	Thr	Asn	Ala	Ser	Ala	Ala	Ile	Ala	Pro	Lys
				110					115					120
Asp	Asn	Leu	Phe	Ile	Arg	Phe	Leu	Lys	Pro	Trp	Leu	Gly	Glu	Gly
				125					130					135

Ile	Leu	Leu	Ser	Gly	Gly	Asp	Lys	Trp	Ser	Arg	His	Arg	Arg	Met	140	145	150
Leu	Thr	Pro	Ala	Phe	His	Phe	Asn	Ile	Leu	Lys	Ser	Tyr	Ile	Thr	155	160	165
Ile	Phe	Asn	Lys	Ser	Ala	Asn	Ile	Met	Leu	Asp	Lys	Trp	Gln	His	170	175	180
Leu	Ala	Ser	Glu	Gly	Ser	Ser	Arg	Leu	Asp	Met	Phe	Glu	His	Ile	185	190	195
Ser	Leu	Met	Thr	Leu	Asp	Ser	Leu	Gln	Lys	Cys	Ile	Phe	Ser	Phe	200	205	210
Asp	Ser	His	Cys	Gln	Glu	Arg	Pro	Ser	Glu	Tyr	Ile	Ala	Thr	Ile	215	220	225
Leu	Glu	Leu	Ser	Ala	Leu	Val	Glu	Lys	Arg	Ser	Gln	His	Ile	Leu	230	235	240
Gln	His	Met	Asp	Phe	Leu	Tyr	Tyr	Leu	Ser	His	Asp	Gly	Arg	Arg	245	250	255
Phe	His	Arg	Ala	Cys	Arg	Leu	Val	His	Asp	Phe	Thr	Asp	Ala	Val	260	265	270
Ile	Arg	Glu	Arg	Arg	Arg	Thr	Leu	Pro	Thr	Gln	Gly	Ile	Asp	Asp	275	280	285
Phe	Phe	Lys	Asp	Lys	Ala	Lys	Ser	Lys	Thr	Leu	Asp	Phe	Ile	Asp	290	295	300
Val	Leu	Leu	Leu	Ser	Lys	Asp	Glu	Asp	Gly	Lys	Ala	Leu	Ser	Asp	305	310	315
Glu	Asp	Ile	Arg	Ala	Glu	Ala	Asp	Thr	Phe	Met	Phe	Gly	Gly	His	320	325	330
Asp	Thr	Thr	Ala	Ser	Gly	Leu	Ser	Trp	Val	Leu	Tyr	Asn	Leu	Ala	335	340	345
Arg	His	Pro	Glu	Tyr	Gln	Glu	Arg	Cys	Arg	Gln	Glu	Val	Gln	Glu	350	355	360
Leu	Leu	Lys	Asp	Arg	Asp	Pro	Lys	Glu	Ile	Glu	Trp	Asp	Asp	Leu	365	370	375
Ala	Gln	Leu	Pro	Phe	Leu	Thr	Met	Cys	Val	Lys	Glu	Ser	Leu	Arg	380	385	390
Leu	His	Pro	Pro	Ala	Pro	Phe	Ile	Ser	Arg	Cys	Cys	Thr	Gln	Asp	395	400	405
Ile	Val	Leu	Pro	Asp	Gly	Arg	Val	Ile	Pro	Lys	Gly	Ile	Thr	Cys	410	415	420
Leu	Ile	Asp	Ile	Ile	Gly	Val	His	His	Asn	Pro	Thr	Val	Trp	Pro	425	430	435
Asp	Pro	Glu	Val	Tyr	Asp	Pro	Phe	Arg	Phe	Asp	Pro	Glu	Asn	Ser	440	445	450

Lys Gly Arg Ser Pro Leu Ala Phe Ile Pro Phe Ser Ala Gly Pro
 455 460 465
 Arg Asn Cys Ile Gly Gln Ala Phe Ala Met Ala Glu Met Lys Val
 470 475 480
 Val Leu Ala Leu Met Leu Leu His Phe Arg Phe Leu Pro Asp His
 485 490 495
 Thr Glu Pro Arg Arg Lys Leu Glu Leu Ile Met Arg Ala Glu Gly
 500 505 510
 Gly Leu Trp Leu Arg Val Glu Pro Leu Asn Val Gly Leu Gln
 515 520

<210> 265
 <211> 584
 <212> DNA
 <213> Homo sapiens

<400> 265
 caacagaagc caagaaggaa gccgtctatc ttgtggcgat catgtataag 50
 ctggcctcct gctgtttgct ttccacagga ttcttaaata ctctcttata 100
 tcttcctctc cttgactcca gggaaatata ctttcaactc tcagcacctc 150
 atgaagacgc gcgcttaact ccggaggagc tagaaagagc ttcccttcta 200
 cagatattgc cagagatgct ggggtgcagaa agaggggata ttctcaggaa 250
 agcagactca agtaccaaca tttttaaccc aagaggaaat ttgagaaagt 300
 ttcaggattt ctctggacaa gatcctaaca ttttaotgag tcattctttg 350
 gccagaatct ggaaaccata caagaaacgt gagactcctg attgcttctg 400
 gaaataactgt gtctgaagtg aaataagcat ctgttagtca gctcagaaac 450
 acccatctta gaatatgaaa aataacacaa tgcttgattt gaaaacagtg 500
 tggagaaaaa ctaggcaaac tacaccctgt tcattgttac ctggaaaata 550
 aatcctctat gttttgcaca aaaaaaaaaa aaaa 584

<210> 266
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 266
 Met Tyr Lys Leu Ala Ser Cys Cys Leu Leu Phe Thr Gly Phe Leu
 1 5 10 15
 Asn Pro Leu Leu Ser Leu Pro Leu Leu Asp Ser Arg Glu Ile Ser
 20 25 30
 Phe Gln Leu Ser Ala Pro His Glu Asp Ala Arg Leu Thr Pro Glu
 35 40 45
 Glu Leu Glu Arg Ala Ser Leu Leu Gln Ile Leu Pro Glu Met Leu
 50 55 60

Gly Ala Glu Arg Gly Asp Ile Leu Arg Lys Ala Asp Ser Ser Thr
65 70 75
Asn Ile Phe Asn Pro Arg Gly Asn Leu Arg Lys Phe Gln Asp Phe
80 85 90
Ser Gly Gln Asp Pro Asn Ile Leu Leu Ser His Leu Leu Ala Arg
95 100 105
Ile Trp Lys Pro Tyr Lys Lys Arg Glu Thr Pro Asp Cys Phe Trp
110 115 120
Lys Tyr Cys Val

<210> 267
<211> 654
<212> DNA
<213> Homo sapiens

<400> 267
gaacattttt agttcccaag gaatgtacat cagccccacg gaagctaggc 50
cacctctggg atgggggttg tggtttaaaa caaacgccag tcatcctata 100
taaggacctg acagccacca ggcaccacct ccgccaggaa ctgcaggccc 150
acctgtctgc aaccagctg aggccatgcc ctcccaggg accgtctgca 200
gcctcctgct cctcggcatg ctctggctgg acttgccat ggcaggctcc 250
agcttcctga gccctgaaca ccagagagtc cagcagagaa aggagtcgaa 300
gaagccacca gccaaagtgc agccccgagc tctagcaggc tggctccgcc 350
cggaagatgg aggtcaagca gaaggggcag aggatgaact ggaagtccgg 400
ttcaacgccc ctttgatgt tggaatcaag ctgtcagggg ttcagtacca 450
gcagcacagc caggccctgg ggaagtttct tcaggacatc ctctgggaag 500
aggccaaaga ggccccagcc gacaagtgat cgccacaag ccttactcac 550
ctctctctaa gtttagaagc gctcatctgg cttttogctt gcttctgcag 600
caactcccac gactgttgta caagctcagg aggcgaataa atgttcaaac 650
tgta 654

<210> 268
<211> 117
<212> PRT
<213> Homo sapiens

<400> 268
Met Pro Ser Pro Gly Thr Val Cys Ser Leu Leu Leu Leu Gly Met
1 5 10 15
Leu Trp Leu Asp Leu Ala Met Ala Gly Ser Ser Phe Leu Ser Pro
20 25 30
Glu His Gln Arg Val Gln Gln Arg Lys Glu Ser Lys Lys Pro Pro
35 40 45

Ala	Lys	Leu	Gln	Pro	Arg	Ala	Leu	Ala	Gly	Trp	Leu	Arg	Pro	Glu
				50					55					60
Asp	Gly	Gly	Gln	Ala	Glu	Gly	Ala	Glu	Asp	Glu	Leu	Glu	Val	Arg
				65					70					75
Phe	Asn	Ala	Pro	Phe	Asp	Val	Gly	Ile	Lys	Leu	Ser	Gly	Val	Gln
				80					85					90
Tyr	Gln	Gln	His	Ser	Gln	Ala	Leu	Gly	Lys	Phe	Leu	Gln	Asp	Ile
				95					100					105
Leu	Trp	Glu	Glu	Ala	Lys	Glu	Ala	Pro	Ala	Asp	Lys			
				110					115					

<210> 269
 <211> 1332
 <212> DNA
 <213> Homo sapiens

<400> 269
 cggccacagc tggcatgctc tgcoctgatcg ccatcctgct gtatgtcctc 50
 gtccagtacc tCGTgaaccc cgggggtgctc cgcacggacc ccagatgtca 100
 agaatatgaa cacgtggctg ctgttcctcc cctgtttccc ggtgcaggtg 150
 cagaccctga tagtcgtgat catogggatg ctCGTgctcc tgctggactt 200
 tcttggttg gtgcacctgg gccagctgct catcttccac atctacctga 250
 gtatgtcccc caccctaagc ccccgatccc cccaaggctg ggtggtcaga 300
 gctgctcatc ttacacctct acttgagtat gtccctaacc ctgagcccc 350
 cagcctggg gccagagtct ttgtcccccg tgtgcgcatg tgttcagggt 400
 cagcctctcc cagaagtgag atcatggaca aaaagggcaa atcacaggaa 450
 gaaattaaat ccatgaggac ccagcaggcc cagcaagaag ctgaactcac 500
 gccgagacct gcaggagtgg tgccagggtgc ttgaagtaac aagtttaaaa 550
 tgttcagaga caatggaatg gaatctatta ggcaagaaca ggacattatg 600
 aaataaggac aggtggactt ccaaaaacac aagtagaat tctaacaatg 650
 aaatatatta caggcaggtc acccactaac caaacaactg aagcgagagc 700
 tgtggtcttg cttggtctca cagtgggcac agcggtaggc ggtcagtcac 750
 gttgctgaac gacggagggt aaactcccca gcccagaaga aacctgtgtt 800
 ggaagtaaca acaacctccc tgcctctggc accagccgtt ttggtcatgg 850
 tgggccagct gcaaagcgtc ttccattctc tgggcagtgg tggccccgag 900
 gctgtggcct ctCagggggt ttctgtggac acgggcagca gagtgtgtcc 950
 aggccagccc ccaagaatgc cctgctcctg acagcttggc caaccctgg 1000
 tcagggcaga gggagtggg tgggtcaggc tctgggctca cctccatctc 1050

cagagcatcc cctgcctgca gttgtggcaa gaacgccag ctcagaatga 1100
acacacccca ccaagagcct ccttggtcat aaccacaggt taccctacaa 1150
accactgtcc ccacacaacc ctggggatgt tttaaaacac acacctctaa 1200
cgcatatctt acagtcactg ttgtcttgcc tgagggttga atttttttta 1250
atgaaagtgc aatgaaaatc actggattaa atcctacgga cacagagctg 1300
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1332

<210> 270

<211> 142

<212> PRT

<213> Homo sapiens

<400> 270

Met	Asn	Thr	Trp	Leu	Leu	Phe	Leu	Pro	Leu	Phe	Pro	Val	Gln	Val
1				5					10				15	
Gln	Thr	Leu	Ile	Val	Val	Ile	Ile	Gly	Met	Leu	Val	Leu	Leu	Leu
				20					25					30
Asp	Phe	Leu	Gly	Leu	Val	His	Leu	Gly	Gln	Leu	Leu	Ile	Phe	His
				35					40					45
Ile	Tyr	Leu	Ser	Met	Ser	Pro	Thr	Leu	Ser	Pro	Arg	Ser	Pro	Gln
				50					55					60
Gly	Trp	Val	Val	Arg	Ala	Ala	His	Leu	Thr	Pro	Leu	Leu	Glu	Tyr
				65					70					75
Val	Pro	Asn	Pro	Glu	Pro	Pro	Thr	Pro	Gly	Ala	Arg	Val	Phe	Val
				80					85					90
Pro	Arg	Val	Arg	Met	Cys	Ser	Gly	Ser	Ala	Ser	Pro	Arg	Ser	Glu
				95					100					105
Ile	Met	Asp	Lys	Lys	Gly	Lys	Ser	Gln	Glu	Glu	Ile	Lys	Ser	Met
				110					115					120
Arg	Thr	Gln	Gln	Ala	Gln	Gln	Glu	Ala	Glu	Leu	Thr	Pro	Arg	Pro
				125					130					135
Ala	Gly	Val	Val	Pro	Gly	Ala								
				140										

<210> 271

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 271

ggagtgcaga tggcatcctt cggttcttcc agacaagctg caagacgctg 50
accatggcca agatggagct ctogaaggcc ttctctggcc agcggacact 100
cctatctgcc atcctcagca tgctatcact cagcttctcc acaacatccc 150
tgctcagcaa ctactggttt gtgggcacac agaaggtgcc caagcccctg 200
tgcgagaaaag gtctggcagc caagtgcctt gacatgccag tgtccctgga 250

tggagatacc aacacatcca cccaggaggt ggtacaatac aactgggaga 300
 ctggggatga cgggttctcc ttccggagct tccggagtgg catgtggcta 350
 tcctgtgagg aaactgtgga agaaccaggg gagaggtgcc gaagtttcat 400
 tgaacttaca ccaccagcca agagaggtga gaaaggacta ctggaatttg 450
 ccacgttgca aggcccatgt caccctactc tccgatttgg agggaagcgg 500
 ttgatggaga aggcttccct cccctcccct cccttggggc tttgtggcaa 550
 aaatcctatg gttatccctg ggaacgcaga tcacctacat cggacttcaa 600
 ttcacagct tcctcctgct actaacagac ttgctactca ctgggaaccc 650
 tgccgtgtggg ctcaaactga gcgcctttgc tgctgtttcc tctgtcctgt 700
 caggtctcct ggggatggtg gccacatga tgtattcaca agtcttccaa 750
 gcgactgtca acttgggtcc agaagactgg agaccacatg tttggaatta 800
 tggctggggc ttctacatgg cctggctctc cttcacctgc tgcattggcg 850
 cggtgtcac caccttcaac acgtacacca ggatggtgct ggagttcaag 900
 tgcaagcata gtaagagctt caaggaaaac ccgaactgcc taccacatca 950
 ccatcagtgt ttccctcggc ggctgtcaag tgcagcccc accgtgggtc 1000
 ctttgaccag ctaccaccag taccataatc agcccatcca ctctgtctct 1050
 gagggagtgc acttctactc cgagctgcgg aacaagggtt ttcaaagagg 1100
 ggccagccag gagctgaaag aagcagttag gtcattctgta gaggaagagc 1150
 agtggttagga gtttaagcggg tttggggagt aggcttgagc cctaccttac 1200
 acgtctgctg attatcaaca tgtgtttaag ccaacatccg tctcttgagc 1250
 atgggtttta gaggtacga ataaggctat gaataagggt tatctttaag 1300
 tctaaggga ttctgggtg cactgctct ctttctctct acagctccat 1350
 cttgtttcac ccacccaca tctcacacat ccagaattcc cttctttact 1400
 gatagtttct gtgccaggtt ctgggctaaa ccatggagat aaaaagaaga 1450
 gtaaaatata cttcccgacc ttaaggatct gaaa 1484

<210> 272
 <211> 285
 <212> PRT
 <213> Homo sapiens

<400> 272
 Met Ala Lys Met Glu Leu Ser Lys Ala Phe Ser Gly Gln Arg Thr
 1 5 10 15
 Leu Leu Ser Ala Ile Leu Ser Met Leu Ser Leu Ser Phe Ser Thr
 20 25 30
 Thr Ser Leu Leu Ser Asn Tyr Trp Phe Val Gly Thr Gln Lys Val

	35	40	45
Pro Lys Pro Leu Cys Glu Lys Gly Leu Ala Ala Lys Cys Phe Asp	50	55	60
Met Pro Val Ser Leu Asp Gly Asp Thr Asn Thr Ser Thr Gln Glu	65	70	75
Val Val Gln Tyr Asn Trp Glu Thr Gly Asp Asp Arg Phe Ser Phe	80	85	90
Arg Ser Phe Arg Ser Gly Met Trp Leu Ser Cys Glu Glu Thr Val	95	100	105
Glu Glu Pro Gly Glu Arg Cys Arg Ser Phe Ile Glu Leu Thr Pro	110	115	120
Pro Ala Lys Arg Gly Glu Lys Gly Leu Leu Glu Phe Ala Thr Leu	125	130	135
Gln Gly Pro Cys His Pro Thr Leu Arg Phe Gly Gly Lys Arg Leu	140	145	150
Met Glu Lys Ala Ser Leu Pro Ser Pro Pro Leu Gly Leu Cys Gly	155	160	165
Lys Asn Pro Met Val Ile Pro Gly Asn Ala Asp His Leu His Arg	170	175	180
Thr Ser Ile His Gln Leu Pro Pro Ala Thr Asn Arg Leu Ala Thr	185	190	195
His Trp Glu Pro Cys Leu Trp Ala Gln Thr Glu Arg Leu Cys Cys	200	205	210
Cys Phe Leu Cys Pro Val Arg Ser Pro Gly Asp Gly Gly Pro His	215	220	225
Asp Val Phe Thr Ser Leu Pro Ser Asp Cys Gln Leu Gly Ser Arg	230	235	240
Arg Leu Glu Thr Thr Cys Leu Glu Leu Trp Leu Gly Leu Leu His	245	250	255
Gly Leu Ala Leu Leu His Leu Leu His Gly Val Gly Cys His His	260	265	270
Leu Gln His Val His Gln Asp Gly Ala Gly Val Gln Val Gln Ala	275	280	285

<210> 273
 <211> 1158
 <212> DNA
 <213> Homo sapiens

<400> 273
 aactggaagg aaagaaagaa aggtcagctt tggcccagat gtggttaccc 50
 cttggtctcc tgtctttatg tctttctcct cttcctattc tgtcatctcc 100
 ctcacttaag tctcaggcct gtcagcagct cctgtggaca ttgccatccc 150
 ctctggttagc cttcagagca aacaggacaa cctatgttat ggatgtttcc 200

accaaccagg gtagtggcat ggagcaccgt aaccatctgt gcttctgtga 250
 tctctatgac agagccactt ctccacctct gaaatgttcc ctgctctgaa 300
 atctggcatg agatggcaca ggtgaccacg cagaagccac cagaatcttg 350
 cctgccctat tctcctccc aagtctgttc tcttattgtc aacctcagca 400
 caacaggctg gcgccaatgg cattacagag aaagcaatct gtgtggctag 450
 tgggcagatt accatgcaag cccaggaga aatggaggag cttttagacc 500
 acctccctgt cagccagtat taacatgtcc ccttccccct gccccgccgt 550
 agattcagga cattcgcccc tgtgtgccac caaaccagga ctttcccctt 600
 ggcttggcat ccctggctct ctctgggtac ccagcaagac gtctgttcca 650
 gggcagtgtg gcatctttca agctccgtta ctatggcgat ggccatgatg 700
 ttacaatccc acttgcctga ataataagt gggaagggga agcagaggga 750
 aatggggcca tgtgaatgca gctgctctgt tctccctacc ctgaggaaaa 800
 accaaagggga agcaacagga acttctgcaa ctggttttta tcggaaagat 850
 catcctgcct gcagatgctg ttgaaggggc acaagaaatg tagctggaga 900
 agattgatga aagtgcaggt gtgtaaggaa atagaacagt ctgctgggag 950
 tcagacctgg aattctgatt ccaaactctt tattactttg ggaagtcact 1000
 cagcctcccc gtagccatct ccagggtgac ggaaccaggt gtattacctg 1050
 ctggaaccaa ggaaactaac aatgtaggtt actagtgaat accccaatgg 1100
 tttctccaat tatgcccatg ccaccaaacc aataaaacaa aattctctaa 1150
 cactgaaa 1158

<210> 274

<211> 86

<212> PRT

<213> Homo sapiens

<400> 274

Met Trp Leu Pro Leu Gly Leu Leu Ser Leu Cys Leu Ser Pro Leu
 1 5 10 15

Pro Ile Leu Ser Ser Pro Ser Leu Lys Ser Gln Ala Cys Gln Gln
 20 25 30

Leu Leu Trp Thr Leu Pro Ser Pro Leu Val Ala Phe Arg Ala Asn
 35 40 45

Arg Thr Thr Tyr Val Met Asp Val Ser Thr Asn Gln Gly Ser Gly
 50 55 60

Met Glu His Arg Asn His Leu Cys Phe Cys Asp Leu Tyr Asp Arg
 65 70 75

Ala Thr Ser Pro Pro Leu Lys Cys Ser Leu Leu
 80 85

<210> 275
<211> 2694
<212> DNA
<213> Homo sapiens

<400> 275
gtagcgcgtc ttgggtctcc cggtgccgc tgctgccgc gccgcctcgg 50
gtcgtggagc caggagcgac gtcacogcca tggcaggcat caaagctttg 100
attagtttgt cctttggagg agcaatcgga ctgatgtttt tgatgcttgg 150
atgtgccctt ccaatataca acaataactg gcccctcttt gttctatttt 200
tttacatcct ttcacctatt ccatactgca tagcaagaag attagtggat 250
gatacagatg ctatgagtaa cgcttgtaag gaacttgcca tctttcttac 300
aacgggcatt gtcgtgtcag cttttggact ccctattgta tttgccagag 350
cacatctgat tgagtggga gcttgtgcac ttgttctcac aggaaacaca 400
gtcatctttg caactatact aggccttttc ttggtctttg gaagcaatga 450
cgacttcagc tggcagcagt ggtgaaaaga aattactgaa ctattgtcaa 500
atggacttcc tgtcatttgt tggccattca cgcacacagg agatggggca 550
gttaatgctg aatggatatag caagcctctt gggggtatth taggtgctcc 600
cttctcactt ttattgtaag catactatth tcacagagac ttgctgaagg 650
attaaaagga ttttctctth tggaaaagct tgactgattt cacacttato 700
tatagtatgc tttttgtggt gtctgtgta atttaaatat ttatgtgtth 750
ttcctgttag gttgatttht tttggaatca atatgcaatg ttaaactt 800
ttttaatgta atcatttgca ttggttagga attcagaatt ccgcgggctc 850
tattactggt caagtacatc ttttctctta aaattattta gcctccatta 900
ttacaaaaaa ttataaaaat aagttttcag tcagtcagga tgacatcact 950
cccaatgtta tgcagacata cagacggttg gcatacgtta tagactgtat 1000
actcagtgc aatatagctg catttatacc tcagaggggc caagtgttaa 1050
tgcccatgcc ctccgttaag ggttgttggg tttactggta gacagatgtt 1100
ttgtggattg aaaattatth tatggaattg ctacagagga gtgcttttct 1150
tctcaattgt tagaagaatt tatgttaaac ttttaaggtaa ggggtgtaaaa 1200
acatttttga gataaggtht ttatttatgt ttattattgt tagagtgagt 1250
tgcaatgtgg gaagaaatga cattgaaatt ccagtthttg aatcctgtth 1300
ctattttataa gtgaaatttg tgatctccta tcaacctthc atgtthttacc 1350
ctgttaaaat ggacatacat ggaaccacta ctgatgaggg acagttgtat 1400
gtttgcatca tatatgccag aaaaccttcc tctgcttctt ccttttgact 1450

tatttggat gttgtatata ttacataaaa taacttttca aatatagttt 1500
aataacactt agaagtgttt acttacctgg aaaataattg ctatgccgta 1550
cattcagagt gccccctccc ctgcaaggcc ttgccatgat taacaagtaa 1600
cttgtagtc ttacagataa ttcatgcatt aacagtttaa gatttagacc 1650
atggtaatag tagttcttat tctctaagggt tatatcatat gtaattttaa 1700
agtattttta agacaagttt cctgtatacc tctgaactgt tttgattttg 1750
agttcatcat gatagatctg ctgtttcctt ataaaaggca tttgttgtgt 1800
gagttaatgc aaagtagcca agtccagcta tatagcagct tcagaaacat 1850
acctgaccaa aaaattccca gtaaccaggc atgatcaatt tatagtggtc 1900
gtttacatct aataattatc aggacttttt tcaggagtgg gttataaaaa 1950
cattcaagtt ggtctgacag tattttgtta aggatatttg tttgtatgtt 2000
tattcagtat acttacataa aaattatttc gccatcagcc aaaactcagt 2050
aatcatgaca gctgtctgtt gttttatgaa gtttatttct caagaaaatg 2100
ggaataaatt tgggatttgt tcagcttttt tactaaagat gcctaaagcc 2150
acaggtttta ttgcctaact taagccatga cttttagata tgagatgacg 2200
ggaagcagga cgaaatatcg gcgtgtggct ggagccttcc cactggaggc 2250
tgaaagtggc ttgtgggtatt ataatgttca gatttcaaga ggaaggtgca 2300
ggtacacatg agttagagag ctggtgagac agttgggaac tctttgtgct 2350
tgtgatctac tggacttttt ttttgcagga agtgcattct ctggtccttc 2400
cctattttct gttctggatg tcagtgcagt gcactgctac tgttttatcc 2450
acttggccac agactttttc taacagctgc gtattatttc tatatactaa 2500
ttgcattggc agcattgtgt ctttgacctt gtatactagc ttgacatagt 2550
gctgtctctg atttctaggc tagttacttg agatatgaat tttccataga 2600
atatgcactg atacaacatt accattcttc tatggaaaga aaacttttga 2650
tgatgaaaca ataaagattt taaatatcta ttttaaaaaa aaaa 2694

<210> 276

<211> 131

<212> PRT

<213> Homo sapiens

<400> 276

Met	Ala	Gly	Ile	Lys	Ala	Leu	Ile	Ser	Leu	Ser	Phe	Gly	Gly	Ala
1				5					10					15

Ile	Gly	Leu	Met	Phe	Leu	Met	Leu	Gly	Cys	Ala	Leu	Pro	Ile	Tyr
			20						25					30

Asn	Lys	Tyr	Trp	Pro	Leu	Phe	Val	Leu	Phe	Phe	Tyr	Ile	Leu	Ser
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	35		40		45
Pro Ile Pro Tyr Cys Ile Ala Arg Arg Leu Val Asp Asp Thr Asp	50		55		60
Ala Met Ser Asn Ala Cys Lys Glu Leu Ala Ile Phe Leu Thr Thr	65		70		75
Gly Ile Val Val Ser Ala Phe Gly Leu Pro Ile Val Phe Ala Arg	80		85		90
Ala His Leu Ile Glu Trp Gly Ala Cys Ala Leu Val Leu Thr Gly	95		100		105
Asn Thr Val Ile Phe Ala Thr Ile Leu Gly Phe Phe Leu Val Phe	110		115		120
Gly Ser Asn Asp Asp Phe Ser Trp Gln Gln Trp	125		130		

<210> 277

<211> 4104

<212> DNA

<213> Homo sapiens

<400> 277

```

cccacgcgtc cgccacgcg tccgcccacg cgtccgcca cgcgtccgcc 50
cacgcgtccg cccacgcgtc cgccacgcg tccggtgcaa gctcgcgccg 100
cacactgcct ggtggaggga aggagcccgg ggcctctctg ccgctccccg 150
cgccgccgtc cgcacctccc caccgcccgc cgcccgccgc ccgcccggcg 200
caaagcatga gtgagcccgc tctctgcagc tgcccggggc gcgaatggca 250
ggctgtttcc gcgagtaaaa aggtggcgcc ggtoagtggc cgtttccaat 300
gacggacatt aaccagactg tcagatcctg gggagtcgcg agccccgagt 350
ttggagtttt ttccccccac aacgtcacag tccgaactgc agagggaaag 400
gaaggcggca ggaaggcgaa gtcggggtc cggcacgtag ttgggaaact 450
tgcgggtcct agaagtcgcc tccccgcctt gccggccgcc cttgcagccc 500
cgagccgagc agcaaagtga gacattgtgc goctgccaga tccgccggcc 550
gcggaaccggg gctgcctcgg aaacacagag gggctctctc tcgccctgca 600
tataattagc ctgcacacaa agggagcagc tgaatggagg ttgtcactct 650
ctggaaaagg atttctgacc gagcgcttcc aatggacatt ctccagtctc 700
tctggaaaga ttctcgctaa tggatttcct gctgctcggt ctctgtctat 750
actggctgct gaggaggccc tcgggggtgg tcttgtgtct gctggggggc 800
tgctttcaga tgctgccgc cgccccagc gggtgccgc agctgtgccg 850
gtgcgagggg cggctgctgt actgcgagc gctcaacctc accgaggcgc 900
cccacaacct gtccggcctg ctgggcttgt cctgcgcta caacagcctc 950

```

tcggagctgc gcgccggcca gttcacgggg ttaatgcagc tcacgtggct 1000
 ctatctggat cacaatcaca totgctccgt gcagggggac gcctttcaga 1050
 aactgcgccg agttaaggaa ctacgctga gttccaacca gatcaccaa 1100
 ctgccaaca ccacctccg gcccatgccc aacctgcgca gcgtggacct 1150
 ctcgtaaac aagctgcagg cgctcgcgcc cgacctcttc cacgggctgc 1200
 ggaagctcac cacgctgcat atgcggggcca acgcatcca gtttgtgcc 1250
 gtgcgcatct tccaggactg ccgcagcctc aagtttctcg acatcggata 1300
 caatcagctc aagagtctgg cgcgcaactc tttcgccggc ttgtttaagc 1350
 tcaccgagct gcacctcgag cacaacgact tggtaaggt gaacttcgcc 1400
 cacttccgc gcctcatctc cctgcactcg ctctgcctgc ggaggaaca 1450
 ggtggccatt gtggtcagct cgctggactg ggtttggaac ctggagaaaa 1500
 tggacttgtc gggcaacgag atcgagtaca tggagcccca tgtgttcgag 1550
 accgtgccgc acctgcagtc cctgcagctg gactccaacc gcctcaccta 1600
 catcgagccc cggatcctca actottggaa gtccctgaca agcatcacc 1650
 tggccgggaa cctgtgggat tgcgggcgca acgtgtgtgc ctagcctcg 1700
 tggctcagca acttccaggg gcgctacgat ggcaacttgc agtgcgccag 1750
 cccggagtac gcacagggcg aggacgtcct ggacgccgtg tacgccttcc 1800
 acctgtgcga ggatggggcc gagccacca gcggccacct gctctcgcc 1850
 gtcaccaacc gcagtgatct ggggccccct gccagctcgg ccaccacgt 1900
 cgcggaacgc ggggaggggc agcacgacgg cacattcgag cctgccaccg 1950
 tggctcttcc aggcggcgag cacgccgaga acgccgtgca gatccacaag 2000
 gtggtcacgg gcaccatggc cctcatcttc tcttctctca tcgtggtcct 2050
 ggtgctctac gtgtcctgga agtgtttccc agccagcctc aggcagctca 2100
 gacagtgttt tgtcacgcag cgcaggaagc aaaagcagaa acagaccatg 2150
 catcagatgg ctgccatgtc tgcccaggaa tactacgttg attacaaacc 2200
 gaaccacatt gagggagccc tggatgatcat caacgagtat ggctcgtgta 2250
 cctgccacca gcagcccgcg agggaatgog aggtgtgatt gtccagtg 2300
 ctctcaaccc atgcgtacc aaatacgctt gggcagccgg gacgggccgg 2350
 cgggcaccag gctggggtct ccttgtctgt gctctgatat gtccttgac 2400
 tgaaacttta aggggatctc tcccagagac ttgacatttt agctttattg 2450
 tgtcttaaaa acaaaagcga attaaaacac acaaaaaaac cccacccac 2500
 aaccttcagg acagtctatc ttaaatttca tatgagaact ccttctctcc 2550

tttgaagatc tgtccatatt caggaatctg agagtgtaaa aaaggtggcc 2600
 ataagacaga gagagaataa tcgtgctttg ttttatgcta ctctcccccac 2650
 cctgcccacg attaaacatc atgtatgtag aagatcttaa gtccatacgc 2700
 atttcatgaa gaaccattgg aaagaggaat ctgcaatctg ggagcttaag 2750
 agcaaatgat gaccatagaa agctatgttc ttactttgtg tgtgtgtctg 2800
 tatgtttctg cgttgtgtgt cttttagagg aagcaaacgt tgtctacaca 2850
 aacgggaatt tagctcacat catttcatgc cctgtgcct ctagctctgg 2900
 agattggtgg ggggaggtgg ggggaaacgg caggaataag ggaaagtgg 2950
 agttttaact aaggttttgt aacacttgaa atcttttctt tctcaaatta 3000
 attatcttta agcttcaaga aacttgcctt gaccctcta agcaaactac 3050
 taagcattta aaagagaatc taatttttaa aggtgtagca cttttttttt 3100
 tattcttccc acagaggggtg ctaatctcat tatgctgtgc tatctgaaaa 3150
 gaacttaagg ccacaattca cgtctcgtcc tgggcattgt gatggattga 3200
 ccctccattt gcagtacctt cccagctgat taaagttcag cagtgggtatt 3250
 gaggtttttc gaatatttat atagaaaaaa agtcttttca catgacaaat 3300
 gacactctca caccagtctt agccctagta gttttttagg ttggaccaga 3350
 ggaagcaggt taaatgagac ctgtcctctg ctgcactcag aaaaaatagg 3400
 cagtccctga tgctcagatc ttagccttga tattaatagt tgagaccacc 3450
 taccacaat gcagcctata ctccaagac tacaaagtta ccatcgcaaa 3500
 ggaaagggtta ttccagtaaa aggaaatagt tttotcaacc atttaaaaaat 3550
 attcttctga actcatcaaa gtagaagagc cccaacctt ttctctctgc 3600
 cttcaagaag gcagacattt ggtatgattt agcatcaaca acacatttat 3650
 gagtatatgt aagtaatcag aggggcaaat gccacttggt attcctccca 3700
 agttttccaa gcaagtacac acagatctct ggtaggatta ggggccactt 3750
 gtgtttccgg cttattttag tcgacttgtc agcaagtttg atgcctagtc 3800
 tatctgacat ggcccagtag aacagggcat tgatggatca catgagatgg 3850
 tagaaggaa acatcacat acccctctca cagagaaaat tatcaaagaa 3900
 ccagaaatta tatctgtttt ggagcaagag tgtcataatg tttcagggtg 3950
 gtcaaaataa acataaatta tctcctctag atgagtggcg atgttggctg 4000
 atttgggtct gccattgaca gaatgtcaaa taaaaggaa ttagctagaa 4050
 tatgaccatt aaatgtgctt ctgaaatata ttttgagata ggtttagaat 4100
 gtca 4104

<210> 278
 <211> 522
 <212> PRT
 <213> Homo sapiens

<400> 278

Met	Asp	Phe	Leu	Leu	Leu	Gly	Leu	Cys	Leu	Tyr	Trp	Leu	Leu	Arg	
1				5					10					15	
Arg	Pro	Ser	Gly	Val	Val	Leu	Cys	Leu	Leu	Gly	Ala	Cys	Phe	Gln	
				20					25					30	
Met	Leu	Pro	Ala	Ala	Pro	Ser	Gly	Cys	Pro	Gln	Leu	Cys	Arg	Cys	
				35					40					45	
Glu	Gly	Arg	Leu	Leu	Tyr	Cys	Glu	Ala	Leu	Asn	Leu	Thr	Glu	Ala	
				50					55					60	
Pro	His	Asn	Leu	Ser	Gly	Leu	Leu	Gly	Leu	Ser	Leu	Arg	Tyr	Asn	
				65					70					75	
Ser	Leu	Ser	Glu	Leu	Arg	Ala	Gly	Gln	Phe	Thr	Gly	Leu	Met	Gln	
				80					85					90	
Leu	Thr	Trp	Leu	Tyr	Leu	Asp	His	Asn	His	Ile	Cys	Ser	Val	Gln	
				95					100					105	
Gly	Asp	Ala	Phe	Gln	Lys	Leu	Arg	Arg	Val	Lys	Glu	Leu	Thr	Leu	
				110					115					120	
Ser	Ser	Asn	Gln	Ile	Thr	Gln	Leu	Pro	Asn	Thr	Thr	Phe	Arg	Pro	
				125					130					135	
Met	Pro	Asn	Leu	Arg	Ser	Val	Asp	Leu	Ser	Tyr	Asn	Lys	Leu	Gln	
				140					145					150	
Ala	Leu	Ala	Pro	Asp	Leu	Phe	His	Gly	Leu	Arg	Lys	Leu	Thr	Thr	
				155					160					165	
Leu	His	Met	Arg	Ala	Asn	Ala	Ile	Gln	Phe	Val	Pro	Val	Arg	Ile	
				170					175					180	
Phe	Gln	Asp	Cys	Arg	Ser	Leu	Lys	Phe	Leu	Asp	Ile	Gly	Tyr	Asn	
				185					190					195	
Gln	Leu	Lys	Ser	Leu	Ala	Arg	Asn	Ser	Phe	Ala	Gly	Leu	Phe	Lys	
				200					205					210	
Leu	Thr	Glu	Leu	His	Leu	Glu	His	Asn	Asp	Leu	Val	Lys	Val	Asn	
				215					220					225	
Phe	Ala	His	Phe	Pro	Arg	Leu	Ile	Ser	Leu	His	Ser	Leu	Cys	Leu	
				230					235					240	
Arg	Arg	Asn	Lys	Val	Ala	Ile	Val	Val	Ser	Ser	Leu	Asp	Trp	Val	
				245					250					255	
Trp	Asn	Leu	Glu	Lys	Met	Asp	Leu	Ser	Gly	Asn	Glu	Ile	Glu	Tyr	
				260					265					270	
Met	Glu	Pro	His	Val	Phe	Glu	Thr	Val	Pro	His	Leu	Gln	Ser	Leu	
				275					280					285	

Gln	Leu	Asp	Ser	Asn	Arg	Leu	Thr	Tyr	Ile	Glu	Pro	Arg	Ile	Leu	
				290					295					300	
Asn	Ser	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Thr	Leu	Ala	Gly	Asn	Leu	
				305					310					315	
Trp	Asp	Cys	Gly	Arg	Asn	Val	Cys	Ala	Leu	Ala	Ser	Trp	Leu	Ser	
				320					325					330	
Asn	Phe	Gln	Gly	Arg	Tyr	Asp	Gly	Asn	Leu	Gln	Cys	Ala	Ser	Pro	
				335					340					345	
Glu	Tyr	Ala	Gln	Gly	Glu	Asp	Val	Leu	Asp	Ala	Val	Tyr	Ala	Phe	
				350					355					360	
His	Leu	Cys	Glu	Asp	Gly	Ala	Glu	Pro	Thr	Ser	Gly	His	Leu	Leu	
				365					370					375	
Ser	Ala	Val	Thr	Asn	Arg	Ser	Asp	Leu	Gly	Pro	Pro	Ala	Ser	Ser	
				380					385					390	
Ala	Thr	Thr	Leu	Ala	Asp	Gly	Gly	Glu	Gly	Gln	His	Asp	Gly	Thr	
				395					400					405	
Phe	Glu	Pro	Ala	Thr	Val	Ala	Leu	Pro	Gly	Gly	Glu	His	Ala	Glu	
				410					415					420	
Asn	Ala	Val	Gln	Ile	His	Lys	Val	Val	Thr	Gly	Thr	Met	Ala	Leu	
				425					430					435	
Ile	Phe	Ser	Phe	Leu	Ile	Val	Val	Leu	Val	Leu	Tyr	Val	Ser	Trp	
				440					445					450	
Lys	Cys	Phe	Pro	Ala	Ser	Leu	Arg	Gln	Leu	Arg	Gln	Cys	Phe	Val	
				455					460					465	
Thr	Gln	Arg	Arg	Lys	Gln	Lys	Gln	Lys	Gln	Thr	Met	His	Gln	Met	
				470					475					480	
Ala	Ala	Met	Ser	Ala	Gln	Glu	Tyr	Tyr	Val	Asp	Tyr	Lys	Pro	Asn	
				485					490					495	
His	Ile	Glu	Gly	Ala	Leu	Val	Ile	Ile	Asn	Glu	Tyr	Gly	Ser	Cys	
				500					505					510	
Thr	Cys	His	Gln	Gln	Pro	Ala	Arg	Glu	Cys	Glu	Val				
				515					520						

<210> 279

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 279

tccgtgcagg gggacgcctt tcagaaactg cgccgagtta aggaac 46

<210> 280

<211> 709

<212> DNA

<213> Homo sapiens

<400> 280

gtgcaaggag ccgaggcgag atgggcgtcc tgggcccgggt cctgctgtgg 50
ctgcagctct gcgcactgac ccaggcggtc tccaaactct gggtcccca 100
cacggacttc gacgtcgcag ccaactggag ccagaaccgg accccgtgcg 150
ccggcggcgc cgttgagttc ccggcggaca agatggtgtc agtcctggtg 200
caagaaggtc acgccgtctc agacatgctc ctgccgctgg atggggaact 250
cgtcctggct tcaggagccg gattcggcgt ctcagacgtg ggctcgcacc 300
tggactgtgg cgcgggcgaa cctgccgtct tccgcgactc tgaccgcttc 350
tcctggcatg acccgcacct gtggcgctct ggggacgagg cacctggcct 400
cttcttcgtg gacgccgagc gcgtgccctg ccgccacgac gacgtcttct 450
ttccgcctag tgctccttc cgcgtggggc tcggccctgg cgctagcccc 500
gtgctgttcc gcagcatctc ggctctgggc cggacgttca cgcgcgacga 550
ggacctggct gttttcctgg cgtcccgccg gggccgccta cgcttccacg 600
ggccgggcgc gctgagcgtg ggccccgagg actgcgcgga cccgtcgggc 650
tgctctgcg gcaacgcgga ggccgagccg tggatctgcg cggccctgct 700
ccagcccct 709

<210> 281

<211> 229

<212> PRT

<213> Homo sapiens

<400> 281

Met	Gly	Val	Leu	Gly	Arg	Val	Leu	Leu	Trp	Leu	Gln	Leu	Cys	Ala
1				5					10					15
Leu	Thr	Gln	Ala	Val	Ser	Lys	Leu	Trp	Val	Pro	Asn	Thr	Asp	Phe
				20					25					30
Asp	Val	Ala	Ala	Asn	Trp	Ser	Gln	Asn	Arg	Thr	Pro	Cys	Ala	Gly
				35					40					45
Gly	Ala	Val	Glu	Phe	Pro	Ala	Asp	Lys	Met	Val	Ser	Val	Leu	Val
				50					55					60
Gln	Glu	Gly	His	Ala	Val	Ser	Asp	Met	Leu	Leu	Pro	Leu	Asp	Gly
				65					70					75
Glu	Leu	Val	Leu	Ala	Ser	Gly	Ala	Gly	Phe	Gly	Val	Ser	Asp	Val
				80					85					90
Gly	Ser	His	Leu	Asp	Cys	Gly	Ala	Gly	Glu	Pro	Ala	Val	Phe	Arg
				95					100					105
Asp	Ser	Asp	Arg	Phe	Ser	Trp	His	Asp	Pro	His	Leu	Trp	Arg	Ser
				110					115					120
Gly	Asp	Glu	Ala	Pro	Gly	Leu	Phe	Phe	Val	Asp	Ala	Glu	Arg	Val
				125					130					135

Pro Cys Arg His Asp Asp Val Phe Phe Pro Pro Ser Ala Ser Phe
140 145 150
Arg Val Gly Leu Gly Pro Gly Ala Ser Pro Val Arg Val Arg Ser
155 160 165
Ile Ser Ala Leu Gly Arg Thr Phe Thr Arg Asp Glu Asp Leu Ala
170 175 180
Val Phe Leu Ala Ser Arg Ala Gly Arg Leu Arg Phe His Gly Pro
185 190 195
Gly Ala Leu Ser Val Gly Pro Glu Asp Cys Ala Asp Pro Ser Gly
200 205 210
Cys Val Cys Gly Asn Ala Glu Ala Gln Pro Trp Ile Cys Ala Ala
215 220 225
Leu Leu Gln Pro

<210> 282
<211> 644
<212> DNA
<213> Homo sapiens

<400> 282
atcgcatcaa ttgggagtag catcttcctc atgggaccag tgaaacagct 50
gaagcgaatg tttgagccta ctcgtttgat tgcaactatc atggtgctgt 100
tgtgttttgc acttaccctg tgttctgcct tttggtggca taacaaggga 150
cttgcaacta tcttctgcat tttgcagtct ttggcattga cgtggtacag 200
cctttccttc ataccatttg caagggatgc tgtgaagaag tgttttgccg 250
tgtgtcttgc ataattcatg gccagtttta tgaagctttg gaaggcacta 300
tggaacagaag ctggtggaca gttttgtaac tatcttcgaa acctctgtct 350
tacagacatg tgccttttat cttgcagcaa tgtgttgctt gtgattcgaa 400
catttgaggg ttacttttgg aagcaacaat acattctcga acctgaatgt 450
cagtagcaca ggatgagaag tgggttctgt atcttggtga gtggaatctt 500
cctcatgtac ctgtttcctc tctggatgtt gtccactga attcccatga 550
atacaaacct attcagcaac agcaaaaaaa aaaaaaaaaa aaaaaaaaaa 600
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 644

<210> 283
<211> 77
<212> PRT
<213> Homo sapiens

<400> 283
Met Gly Pro Val Lys Gln Leu Lys Arg Met Phe Glu Pro Thr Arg
1 5 10 15
Leu Ile Ala Thr Ile Met Val Leu Leu Cys Phe Ala Leu Thr Leu

	20		25		30
Cys Ser Ala Phe Trp Trp His Asn Lys Gly Leu Ala Leu Ile Phe					
	35		40		45
Cys Ile Leu Gln Ser Leu Ala Leu Thr Trp Tyr Ser Leu Ser Phe					
	50		55		60
Ile Pro Phe Ala Arg Asp Ala Val Lys Lys Cys Phe Ala Val Cys					
	65		70		75

Leu Ala

<210> 284
 <211> 2623
 <212> DNA
 <213> Homo sapiens

<400> 284
 ttgagcgag gtgagctcct gcgcgttccg ggggcgttcc tccagtcacc 50
 ctcccgccgt taccgcggc gcgcccagg gagtctctc cagaccctcc 100
 ctcccggtgc tccaaactaa tacggactga acggatcgct gcgagggtgg 150
 gagagaaaat tagggggaga aaggacagag agagcaacta ccatccatag 200
 ccagatagat tatcttacac tgaactgac aagtactttg aaaatgactt 250
 cgaaatttat cttggtgtcc ttcatacttg ctgcactgag tctttcaacc 300
 accttttctc tccaactaga ccagcaaaag gttctactag tttcttttga 350
 tggattccgt tgggattact tatataaagt tccaacgccc cattttcatt 400
 atattatgaa atatggtgtt cacgtgaagc aagttactaa tgtttttatt 450
 acaaaaacct accctaacca ttatactttg gtaactggcc tctttgcaga 500
 gaatcatggg attgttgcaa atgatatgtt tgaacctatt cggaacaaat 550
 ctttctcctt ggatcacatg aatatttatg attccaagtt ttgggaagaa 600
 gcgacaccaa tatggatcac aaaccagagg gcaggacata ctagtgtgtc 650
 agccatgtgg cccggaacag atgtaaaaat acataagcgc tttcctactc 700
 attacatgcc ttacaatgag tcagtttcat ttgaagatag agttgccaaa 750
 attgttgaat ggtttacgtc aaaagagccc ataaatcttg gtcttctcta 800
 ttgggaagac cctgatgaca tgggccacca tttgggacct gacagtccgc 850
 tcatggggcc tgtcatttca gatattgaca agaagttagg atatctcata 900
 caaatgctga aaaaggcaaa gttgtggaac actctgaacc taatcatcac 950
 aagtgatcat ggaatgacgc agtgctctga ggaaagggtta atagaacttg 1000
 accagtacct ggataaagac cactataccc tgattgatca atctccagta 1050
 gcagccatct tgccaaaaga aggtaaaatt gatgaagtct atgaagcact 1100

aactcacgct catcctaatac ttactgttta caaaaaagaa gacgttccag 1150
aaaggtggca ttacaaatac aacagtogaa ttcaaccaat catagcagtg 1200
gctgatgaag ggtggcacat ttacagaat aagtcagatg actttctgtt 1250
aggcaaccac ggttacgata atgcgttagc agatatgcat ccaatatttt 1300
tagcccatgg tctgccttc agaaagaatt tctcaaaaga agccatgaac 1350
tccacagatt tgtaccact actatgccac ctctcaata tcaactgcat 1400
gccacacaat ggatcattct ggaatgtcca ggatctgctc aattcagcaa 1450
tgccaagggt ggtcccttat acacagagta ctatactcct ccctggtagt 1500
gttaaaccag cagaatatga ccaagagggg tcataccctt atttcatagg 1550
ggtctctctt ggcagcatta tagtgattgt attttttgta attttcatta 1600
agcatttaat tcacagtcaa atacctgcct tacaagatat gcatgctgaa 1650
atagctcaac cattattaca agcctaattgt tactttgaag tggatttgca 1700
tattgaagtg gagattccat aattatgtca gtgtttaaag gtttcaaatt 1750
ctgggaaacc agttcaaac atctgcagaa accattaagc agttacatat 1800
ttaggtatac acacacacac acacacacac atacacacac acggacccaa 1850
atacttacac ctgcaaagga ataaagatgt gagagtatgt ctccattgtt 1900
cactgtagca tagggataga taagatcctg ctttatttgg acttggcgca 1950
gataatgtat atatttagca actttgcact atgtaaagta ctttatatat 2000
tgcactttaa atttctctcc tgatgggtac ttttaattga aatgcacttt 2050
atggacagtt atgtcttata acttgattga aaatgacaac tttttgcacc 2100
catgtcacag aatacttgtt acgcattgtt caaactgaag gaaatttcta 2150
ataatcccga ataatgaaca tagaaatcta tctccataaa ttgagagaag 2200
aagaagggtga taagtgttga aaattaaatg tgataacott tgaacottga 2250
attttgaga tgtattccca acagcagaat gcaactgtgg gcatttcttg 2300
tcttatttct ttcagagaa cgtggttttc atttattttt ccctcaaaag 2350
agagtcaaat actgacagat tcgttctaaa tatattgttt ctgtcataaa 2400
attattgtga tttcctgatg agtcatatta ctgtgatttt cataataatg 2450
aagacaccat gaatatactt ttcttctata tagttcagca atggcctgaa 2500
tagaagcaac caggcaccat ctgagcaatg ttttctcttg tttgtaatta 2550
tttgctcctt tgaaaattaa atcactatta attacattaa aaatcaaatt 2600
ggataaaaaa aaaaaaaaaa aaa 2623

<210> 285

<211> 477
 <212> PRT
 <213> Homo sapiens

<400> 285

Met	Thr	Ser	Lys	Phe	Ile	Leu	Val	Ser	Phe	Ile	Leu	Ala	Ala	Leu	1	5	10	15
Ser	Leu	Ser	Thr	Thr	Phe	Ser	Leu	Gln	Leu	Asp	Gln	Gln	Lys	Val	20	25	30	
Leu	Leu	Val	Ser	Phe	Asp	Gly	Phe	Arg	Trp	Asp	Tyr	Leu	Tyr	Lys	35	40	45	
Val	Pro	Thr	Pro	His	Phe	His	Tyr	Ile	Met	Lys	Tyr	Gly	Val	His	50	55	60	
Val	Lys	Gln	Val	Thr	Asn	Val	Phe	Ile	Thr	Lys	Thr	Tyr	Pro	Asn	65	70	75	
His	Tyr	Thr	Leu	Val	Thr	Gly	Leu	Phe	Ala	Glu	Asn	His	Gly	Ile	80	85	90	
Val	Ala	Asn	Asp	Met	Phe	Asp	Pro	Ile	Arg	Asn	Lys	Ser	Phe	Ser	95	100	105	
Leu	Asp	His	Met	Asn	Ile	Tyr	Asp	Ser	Lys	Phe	Trp	Glu	Glu	Ala	110	115	120	
Thr	Pro	Ile	Trp	Ile	Thr	Asn	Gln	Arg	Ala	Gly	His	Thr	Ser	Gly	125	130	135	
Ala	Ala	Met	Trp	Pro	Gly	Thr	Asp	Val	Lys	Ile	His	Lys	Arg	Phe	140	145	150	
Pro	Thr	His	Tyr	Met	Pro	Tyr	Asn	Glu	Ser	Val	Ser	Phe	Glu	Asp	155	160	165	
Arg	Val	Ala	Lys	Ile	Val	Glu	Trp	Phe	Thr	Ser	Lys	Glu	Pro	Ile	170	175	180	
Asn	Leu	Gly	Leu	Leu	Tyr	Trp	Glu	Asp	Pro	Asp	Asp	Met	Gly	His	185	190	195	
His	Leu	Gly	Pro	Asp	Ser	Pro	Leu	Met	Gly	Pro	Val	Ile	Ser	Asp	200	205	210	
Ile	Asp	Lys	Lys	Leu	Gly	Tyr	Leu	Ile	Gln	Met	Leu	Lys	Lys	Ala	215	220	225	
Lys	Leu	Trp	Asn	Thr	Leu	Asn	Leu	Ile	Ile	Thr	Ser	Asp	His	Gly	230	235	240	
Met	Thr	Gln	Cys	Ser	Glu	Glu	Arg	Leu	Ile	Glu	Leu	Asp	Gln	Tyr	245	250	255	
Leu	Asp	Lys	Asp	His	Tyr	Thr	Leu	Ile	Asp	Gln	Ser	Pro	Val	Ala	260	265	270	
Ala	Ile	Leu	Pro	Lys	Glu	Gly	Lys	Phe	Asp	Glu	Val	Tyr	Glu	Ala	275	280	285	
Leu	Thr	His	Ala	His	Pro	Asn	Leu	Thr	Val	Tyr	Lys	Lys	Glu	Asp				

	290		295		300
Val Pro Glu Arg	Trp His Tyr Lys Tyr	Asn Ser Arg Ile Gln Pro	305	310	315
Ile Ile Ala Val	Ala Asp Glu Gly Trp	His Ile Leu Gln Asn Lys	320	325	330
Ser Asp Asp Phe	Leu Leu Gly Asn His	Gly Tyr Asp Asn Ala Leu	335	340	345
Ala Asp Met His	Pro Ile Phe Leu Ala	His Gly Pro Ala Phe Arg	350	355	360
Lys Asn Phe Ser	Lys Glu Ala Met Asn	Ser Thr Asp Leu Tyr Pro	365	370	375
Leu Leu Cys His	Leu Leu Asn Ile Thr	Ala Met Pro His Asn Gly	380	385	390
Ser Phe Trp Asn	Val Gln Asp Leu Leu	Asn Ser Ala Met Pro Arg	395	400	405
Val Val Pro Tyr	Thr Gln Ser Thr Ile	Leu Leu Pro Gly Ser Val	410	415	420
Lys Pro Ala Glu	Tyr Asp Gln Glu Gly	Ser Tyr Pro Tyr Phe Ile	425	430	435
Gly Val Ser Leu	Gly Ser Ile Ile Val	Ile Val Phe Phe Val Ile	440	445	450
Phe Ile Lys His	Leu Ile His Ser Gln	Ile Pro Ala Leu Gln Asp	455	460	465
Met His Ala Glu	Ile Ala Gln Pro Leu	Leu Gln Ala	470	475	

<210> 286

<211> 1337

<212> DNA

<213> Homo sapiens

<400> 286

```

ggatttttgt gatccgcgat tcgctccac gggcgggacc ttgtactg 50
cgggaggccc aggacaggcc caccctgcgg ggcgggaggg agccggggtg 100
agggaggtga agaaaccaag acgcagagag gccaaagcccc ttgccttggg 150
tcacacagcc aaaggaggca gagccagaac tcacaaccag atccagaggc 200
aacagggaca tggccacctg ggacgaaaag gcagtcaccc gcaggggcaa 250
ggtggctccc gctgagagga tgagcaagtt ctttaaggcac ttcacggtcg 300
tgggagacga ctaccatgcc tggaacatca actacaagaa atggggagaat 350
gaagaggagg aggaggagga ggagcagcca ccacccacac cagtctcagg 400
cgaggaaggc agagctgcag cccctgacgt tgcccctgcc cctggccccg 450
caccagggc ccccttgac ttcaggggca tggtgaggaa actgttcagc 500

```

tcccacaggt ttcaggatcat catcatctgc ttggtggttc tggatgccct 550
 cctggtgctt gctgagctca tcctggacct gaagatcatc cagcccgaca 600
 agaataacta tgctgccatg gtattccact acatgagcat caccatcttg 650
 gtctttttta tgatggagat catcttttaa ttatttgtct tccgcctgag 700
 ttctttcacc acaagtttga gatcctggat gcccgctcgtg gtggtggtct 750
 cattcatcct ggacattgtc ctctgtttcc aggagcacca gtttgaggct 800
 ctgggcctgc tgattctgct ccggtctgtg cgggtggccc ggatcatcaa 850
 tgggattatc atctcagtta agacacgttc agaacggcaa ctcttaaggt 900
 taaaacagat gaatgtacaa ttggccgcca agattcaaca ctttgagtgc 950
 agctgctctg agaagcccct ggactgatga gtttgctgta tcaacctgta 1000
 aggagaagct ctctccggat ggctatggga atgaaagaat ccgacttcta 1050
 ctctcacaca gccaccgtga aagtcctgga gtaaaatgtg ctgtgtacag 1100
 aagagagaga aggaagcagg ctggcatggt cactgggctg gtgttacgac 1150
 agagaacctg acagtcactg gccagttatc acttcagatt acaaatacaca 1200
 cagagcatct gcctgttttc aatcacaga gaacaaaacc aaaatctata 1250
 aagatattct gaaaatatga cagaatttga caaataaaaag cataaacgtg 1300
 taaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1337

<210> 287

<211> 255

<212> PRT

<213> Homo sapiens

<400> 287

Met	Ala	Thr	Trp	Asp	Glu	Lys	Ala	Val	Thr	Arg	Arg	Ala	Lys	Val
1				5					10					15
Ala	Pro	Ala	Glu	Arg	Met	Ser	Lys	Phe	Leu	Arg	His	Phe	Thr	Val
			20						25					30
Val	Gly	Asp	Asp	Tyr	His	Ala	Trp	Asn	Ile	Asn	Tyr	Lys	Lys	Trp
			35						40					45
Glu	Asn	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Gln	Pro	Pro	Pro	Thr	
			50						55					60
Pro	Val	Ser	Gly	Glu	Glu	Gly	Arg	Ala	Ala	Ala	Pro	Asp	Val	Ala
			65						70					75
Pro	Ala	Pro	Gly	Pro	Ala	Pro	Arg	Ala	Pro	Leu	Asp	Phe	Arg	Gly
			80						85					90
Met	Leu	Arg	Lys	Leu	Phe	Ser	Ser	His	Arg	Phe	Gln	Val	Ile	Ile
			95						100					105
Ile	Cys	Leu	Val	Val	Leu	Asp	Ala	Leu	Leu	Val	Leu	Ala	Glu	Leu
			110						115					120

Ile	Leu	Asp	Leu	Lys	Ile	Ile	Gln	Pro	Asp	Lys	Asn	Asn	Tyr	Ala	
				125					130					135	
Ala	Met	Val	Phe	His	Tyr	Met	Ser	Ile	Thr	Ile	Leu	Val	Phe	Phe	
				140					145					150	
Met	Met	Glu	Ile	Ile	Phe	Lys	Leu	Phe	Val	Phe	Arg	Leu	Ser	Ser	
				155					160					165	
Phe	Thr	Thr	Ser	Leu	Arg	Ser	Trp	Met	Pro	Val	Val	Val	Val	Val	
				170					175					180	
Ser	Phe	Ile	Leu	Asp	Ile	Val	Leu	Leu	Phe	Gln	Glu	His	Gln	Phe	
				185					190					195	
Glu	Ala	Leu	Gly	Leu	Leu	Ile	Leu	Leu	Arg	Leu	Trp	Arg	Val	Ala	
				200					205					210	
Arg	Ile	Ile	Asn	Gly	Ile	Ile	Ile	Ser	Val	Lys	Thr	Arg	Ser	Glu	
				215					220					225	
Arg	Gln	Leu	Leu	Arg	Leu	Lys	Gln	Met	Asn	Val	Gln	Leu	Ala	Ala	
				230					235					240	
Lys	Ile	Gln	His	Leu	Glu	Phe	Ser	Cys	Ser	Glu	Lys	Pro	Leu	Asp	
				245					250					255	

<210> 288

<211> 3334

<212> DNA

<213> Homo sapiens

<400> 288

cggtctcgagc tcgagccgaa tcggctcgag gggcagtgga gcacccagca 50

ggccgccaac atgctctgtc tgtgcctgta cgtgcgggtc atcggggaag 100

cccagaccga gttccagtac tttgagtcga aggggctccc tgccgagctg 150

aagtccattt tcaagctcag tgtcttcac cctcccagg aattctccac 200

ctaccgccag tggaagcaga aaattgtaca agctggagat aaggaccttg 250

atgggcagct agactttgaa gaatttgtcc attatctcca agatcatgag 300

aagaagctga ggctggtgtt taagattttg gacaaaaaga atgatggacg 350

cattgacgcg caggagatca tgcagtcctt gcgggacttg ggagtcaaga 400

tatctgaaca gcaggcagaa aaaattctca agagcatgga taaaaacggc 450

acgatgacca tcgactggaa cgagtggaga gactaccacc tcctccaccc 500

cgtggaaaac atccccgaga tcatcctcta ctggaagcat tccacgatct 550

ttgatgtggg tgagaatcta acgggtcccg atgagttcac agtggaggag 600

aggcagacgg ggatgtggtg gagacacctg gtggcaggag gtggggcagg 650

ggccgtatcc agaacctgca cggccccctt ggacaggctc aaggtgctca 700

tgcagggtcca tgcctcccg cgaacaaca tgggcatcgt tgggtggcttc 750

actcagatga ttcgagaagg aggggccagg tcaactctggc ggggcaatgg 800
 catcaacgtc ctcaaaattg cccccgaatc agccatcaaa ttcattggcct 850
 atgagcagat caagcgcctt gttggtagtg accaggagac tctgaggatt 900
 cacgagaggc ttgtggcagg gtccttggca ggggccatcg cccagagcag 950
 catctacca atggagggtcc tgaagaccgc gatggcgctg cggaagacag 1000
 gccagtactc aggaatgctg gactgcgcca ggaggatcct ggccagagag 1050
 ggggtggccg ccttctacaa aggcattgtc cccaacatgc tgggcatcat 1100
 cccctatgcc ggcacgcacc ttgcagtcta cgagacgctc aagaatgcct 1150
 ggctgcagca ctatgcagtg aacagcgcgg accccggcgt gtttgtgctc 1200
 ctggcctgtg gcacatgtc cagtacctgt ggccagctgg ccagctaccc 1250
 cctggcccta gtcaggaccc ggatgcaggc gcaagcctct attgagggcg 1300
 ctccggaggt gaccatgagc agcctcttca aacatatact gcggaccgag 1350
 ggggccttcg ggctgtacag ggggctggcc cccaacttca tgaaggatcat 1400
 cccagctgtg agcatcagct acgtgggtcta cgagaacctg aagatcaccc 1450
 tgggcgtgca gtcgcggtga cggggggagg gccgcccggc agtggactcg 1500
 ctgatacttg gccgcagcct ggggtgtgca gccatctcat tctgtgaatg 1550
 tgccaacact aagctgtctc gagccaagct gtgaaaacct tagacgcacc 1600
 cgcaggaggg gtgggggagag ctggcaggcc cagggtctgt cctgctgacc 1650
 ccagcagacc ctctgtttg ttccagcgaa gaccacaggc attccttagg 1700
 gtccagggtc agcaggctcc gggtcacat gtgtaaggac aggacatttt 1750
 ctgcagtgcc tgccaatagt gagcttgag cctggaggcc ggcttagttc 1800
 ttccatttca cccttgagc cagctgttg ccacggcccc tgccctctgg 1850
 tctgccgtgc atctccctgt gccctcttgc tgctgctg tctgctgagg 1900
 taagggtgga ggagggtac agcccacatc ccacccctc gtccaatccc 1950
 ataatccatg atgaaagggt aggtcacgtg gcctcccagg cctgacttcc 2000
 caacctacag cattgacgcc aacttggtg tgaaggaaga ggaaaggatc 2050
 tggccttgtg gtcactggca tctgagccct gctgatggct ggggctctcg 2100
 ggcatgcttg ggagtgcagg gggctcgggc tgctggcct ggctgcacag 2150
 aaggcaagtg ctgggggtca tgggtgctctg agctggcctg gaccctgtca 2200
 ggatgggccc cacctcagaa ccaaactcac tgtccccact gtggcatgag 2250
 ggcagtggag caccatgttt gagggcgaag ggcagagcgt ttgtgtgttc 2300
 tggggaggga aggaaaagg gttggaggcc ttaattatgg actgttggga 2350

aaagggtttt gtccagaagg acaagccgga caaatgagcg acttctgtgc 2400
 ttccagagga agacgaggga gcaggagctt ggctgactgc tcagagtctg 2450
 ttctgacgcc ctgggggttc ctgtccaacc ccagcagggg cgcagcgga 2500
 ccagccccac attccacttg tgtcactgct tggaacctat ttattttgta 2550
 tttatttgaa cagagttatg tcctaactat ttttatagat ttgtttaatt 2600
 aatagcttgt cattttcaag ttcatTTTT attcatattt atgttcatgg 2650
 ttgattgtac cttcccaagc ccgcccagtg ggatgggagg aggaggagaa 2700
 ggggggcctt gggccgctgc agtcacatct gtccagagaa attccttttg 2750
 ggactggagg cagaaaagcg gccagaaggc agcagccctg gtcctttcc 2800
 tttggcaggt tggggaaggg cttgccccca gccttaggat ttcagggttt 2850
 gactgggggc gtggagagag agggaggaac ctcaataacc ttgaagggtg 2900
 aatccagtta tttcctgccc tgcgagggtt tctttatttc actcttttct 2950
 gaatgtcaag gcagtgaggt gcctctcact gtgaatttgt ggtgggcggg 3000
 ggctggagga gaggggtggg ggctggctcc gtccctccca gccttctgct 3050
 gcccttgctt aacaatgccg gccaaactggc gacctcacgg ttgcacttcc 3100
 attccaccag aatgacctga tgaggaaatc ttcaatagga tgcaaagatc 3150
 aatgcaaaaa ttgttatata tgaacatata actggagtcg tcaaaaagca 3200
 aattaagaaa gaattggacg ttagaagttg tcatttaaag cagccttcta 3250
 ataaagttgt ttcaaagctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3300
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 3334

<210> 289
 <211> 469
 <212> PRT
 <213> Homo sapiens

<400> 289
 Met Leu Cys Leu Cys Leu Tyr Val Pro Val Ile Gly Glu Ala Gln
 1 5 10 15
 Thr Glu Phe Gln Tyr Phe Glu Ser Lys Gly Leu Pro Ala Glu Leu
 20 25 30
 Lys Ser Ile Phe Lys Leu Ser Val Phe Ile Pro Ser Gln Glu Phe
 35 40 45
 Ser Thr Tyr Arg Gln Trp Lys Gln Lys Ile Val Gln Ala Gly Asp
 50 55 60
 Lys Asp Leu Asp Gly Gln Leu Asp Phe Glu Glu Phe Val His Tyr
 65 70 75
 Leu Gln Asp His Glu Lys Lys Leu Arg Leu Val Phe Lys Ile Leu
 80 85 90

Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala	Gln	Glu	Ile	Met	Gln	
				95					100					105	
Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu	Gln	Gln	Ala	Glu	
				110					115					120	
Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met	Thr	Ile	Asp	
				125					130					135	
Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val	Glu	Asn	
				140					145					150	
Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe	Asp	
				155					160					165	
Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu	
				170					175					180	
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	
				185					190					195	
Ala	Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	
				200					205					210	
Lys	Val	Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	
				215					220					225	
Ile	Val	Gly	Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	
				230					235					240	
Ser	Leu	Trp	Arg	Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	
				245					250					255	
Glu	Ser	Ala	Ile	Lys	Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	
				260					265					270	
Val	Gly	Ser	Asp	Gln	Glu	Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	
				275					280					285	
Ala	Gly	Ser	Leu	Ala	Gly	Ala	Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	
				290					295					300	
Met	Glu	Val	Leu	Lys	Thr	Arg	Met	Ala	Leu	Arg	Lys	Thr	Gly	Gln	
				305					310					315	
Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg	Arg	Ile	Leu	Ala	Arg	Glu	
				320					325					330	
Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val	Pro	Asn	Met	Leu	Gly	
				335					340					345	
Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu	Thr	Leu	
				350					355					360	
Lys	Asn	Ala	Trp	Leu	Gln	His	Tyr	Ala	Val	Asn	Ser	Ala	Asp	Pro	
				365					370					375	
Gly	Val	Phe	Val	Leu	Leu	Ala	Cys	Gly	Thr	Met	Ser	Ser	Thr	Cys	
				380					385					390	
Gly	Gln	Leu	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	
				395					400					405	

Gln	Ala	Gln	Ala	Ser	Ile	Glu	Gly	Ala	Pro	Glu	Val	Thr	Met	Ser
				410					415					420
Ser	Leu	Phe	Lys	His	Ile	Leu	Arg	Thr	Glu	Gly	Ala	Phe	Gly	Leu
				425					430					435
Tyr	Arg	Gly	Leu	Ala	Pro	Asn	Phe	Met	Lys	Val	Ile	Pro	Ala	Val
				440					445					450
Ser	Ile	Ser	Tyr	Val	Val	Tyr	Glu	Asn	Leu	Lys	Ile	Thr	Leu	Gly
				455					460					465
Val	Gln	Ser	Arg											

<210> 290
 <211> 1658
 <212> DNA
 <213> Homo sapiens

<400> 290
 ggaaggcagc ggcagctcca ctcagccagt acccagatac gctgggaacc 50
 ttccccagcc atggcttccc tggggcagat cctcttctgg agcataatta 100
 gcatcatcat tattctggct ggagcaattg cactcatcat tggctttggt 150
 atttcaggga gacactccat cacagtcact actgtgcct cagctgggaa 200
 cattggggag gatggaatcc tgagctgcac ttttgaacct gacatcaaac 250
 tttctgatat cgtgatacaa tggctgaagg aaggtgtttt aggcttggtc 300
 catgagttca aagaaggcaa agatgagctg tcggagcagg atgaaatgtt 350
 cagaggccgg acagcagtgt ttgctgatca agtgatagtt ggcaatgcct 400
 ctttgcggt gaaaaacgtg caactcacag atgctggcac ctacaaatgt 450
 tatatcatca cttctaaagg caagggaat gctaaccttg agtataaaac 500
 tggagccttc agcatgccgg aagtgaatgt ggactataat gccagctcag 550
 agaccttgcg gtgtgaggct ccccgatggt tccccagcc cacagtggtc 600
 tgggcatccc aagttgacca gggagccaac ttctcggaag tctccaatac 650
 cagctttgag ctgaactctg agaatgtgac catgaagggt gtgtctgtgc 700
 tctacaatgt tacgatcaac aacacatact cctgtatgat tgaaaatgac 750
 attgccaaaag caacagggga tatcaaagt acagaatcgg agatcaaaag 800
 gggagtcac ctacagctgc taaactcaaa ggcttctctg tgtgtctctt 850
 ctttctttgc catcagctgg gcacttctgc ctctcagccc ttacctgatg 900
 ctaaaataat gtgccttggc cacaaaaaag catgcaaagt cattgttaca 950
 acagggatct acagaactat ttcaccacca gatatgacct agttttatat 1000
 ttctgggagg aaatgaattc atatctagaa gtctggagt agcaaacaag 1050

	155		160		165
Leu Arg Cys Glu	Ala Pro Arg Trp Phe	Pro Gln Pro Thr Val	Val		
	170		175		180
Trp Ala Ser Gln	Val Asp Gln Gly Ala	Asn Phe Ser Glu Val	Ser		
	185		190		195
Asn Thr Ser Phe	Glu Leu Asn Ser Glu	Asn Val Thr Met Lys	Val		
	200		205		210
Val Ser Val Leu	Tyr Asn Val Thr Ile	Asn Asn Thr Tyr Ser	Cys		
	215		220		225
Met Ile Glu Asn	Asp Ile Ala Lys Ala	Thr Gly Asp Ile Lys	Val		
	230		235		240
Thr Glu Ser Glu	Ile Lys Arg Arg Ser	His Leu Gln Leu Leu	Asn		
	245		250		255
Ser Lys Ala Ser	Leu Cys Val Ser Ser	Phe Phe Ala Ile Ser	Trp		
	260		265		270
Ala Leu Leu Pro	Leu Ser Pro Tyr Leu	Met Leu Lys			
	275		280		

<210> 292

<211> 1484

<212> DNA

<213> Homo sapiens

<400> 292

```

gaattttag aagacagcgg cggtgccatg gcggcgtctc tggggcaggt 50
gttggctctg gtgctgggtg ccgctctgtg ggggtggcacg cagccgctgc 100
tgaagcgggc ctccgccggc ctgcagcggg ttcattgagcc gacctggggc 150
cagcagttgc tacaggagat gaagaccctc ttcttgaata ctgagtacct 200
gatgcccttt ctctcaacc agtgtggatc ccttctctat tacctcacct 250
tggcatcgac agatctgacc ctggctgtgc ccatctgtaa ctctctggct 300
atcatcttca cactgattgt tgggaaggcc cttggagaag atattggtgg 350
aaaacgtaag ttagactact gcgagtgcgg gacgcagctc tgtggatctc 400
gacataacctg tgtagttcc ttcccagaac ccatctcccc agagtgggtg 450
aggacacggc cttttcccat cctgcccttt cctctgcagc tgttttgctt 500
ccttgtggcc atcagagttc ccttcccctg gacagtctgg agaaagacag 550
aggctggggt ttgggattga agaccagacc ccatctgagc ctttctcca 600
gccctgtacc agctcctact ggcatggctg agctcagacc ctctgattt 650
ctgcctatta tcccaggagc agttgctggc atggtgctca ccgtgatagg 700
aatttcactc tgcatacaaa gctcagtgag taagaccagc gggcaacagt 750
ctaccctttg agtgggcccga acccaattcc agctctgctg cctccaggaa 800

```

gcccttgggc catgaagtgc tggcagtgag cggatggacc tagcacttcc 850
 cctctctggc cttagcttcc tcctctctta tggggataac agctacctca 900
 tggatcacaa taagagaaca agagtgaag agttttgtaa cttcaagtg 950
 ctgttcagct gcggggattt agcacaggag actctacgct caccctcagc 1000
 aacctttctg ccccagcagc tctcttcctg ctaacatctc aggctcccag 1050
 cccagccacc attactgtgg cctgatctgg actatcatgg tggcaggttc 1100
 catggactgc agaactccag ctgcatggaa agggccagct gcagactttg 1150
 agccagaaat gcaaacggga ggcctctggg actcagtcag agcgctttgg 1200
 ctgaatgagg ggtggaaccg agggaagaag gtgcgtcgga gtggcagatg 1250
 caggaaatga gctgtctatt agccttgctt gccccacca tgaggtaggc 1300
 agaaatcctc actgccagcc cctcttaaac aggtagagag ctgtgagccc 1350
 cagccccacc tgactccagc acacctggcg agtagtagct gtcaataaat 1400
 ctatgtaaac agacaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1450
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1484

<210> 293

<211> 180

<212> PRT

<213> Homo sapiens

<400> 293

Met	Ala	Ala	Ser	Leu	Gly	Gln	Val	Leu	Ala	Leu	Val	Leu	Val	Ala	1	5	10	15
Ala	Leu	Trp	Gly	Gly	Thr	Gln	Pro	Leu	Leu	Lys	Arg	Ala	Ser	Ala	20	25	30	
Gly	Leu	Gln	Arg	Val	His	Glu	Pro	Thr	Trp	Ala	Gln	Gln	Leu	Leu	35	40	45	
Gln	Glu	Met	Lys	Thr	Leu	Phe	Leu	Asn	Thr	Glu	Tyr	Leu	Met	Pro	50	55	60	
Phe	Leu	Leu	Asn	Gln	Cys	Gly	Ser	Leu	Leu	Tyr	Tyr	Leu	Thr	Leu	65	70	75	
Ala	Ser	Thr	Asp	Leu	Thr	Leu	Ala	Val	Pro	Ile	Cys	Asn	Ser	Leu	80	85	90	
Ala	Ile	Ile	Phe	Thr	Leu	Ile	Val	Gly	Lys	Ala	Leu	Gly	Glu	Asp	95	100	105	
Ile	Gly	Gly	Lys	Arg	Lys	Leu	Asp	Tyr	Cys	Glu	Cys	Gly	Thr	Gln	110	115	120	
Leu	Cys	Gly	Ser	Arg	His	Thr	Cys	Val	Ser	Ser	Phe	Pro	Glu	Pro	125	130	135	
Ile	Ser	Pro	Glu	Trp	Val	Arg	Thr	Arg	Pro	Phe	Pro	Ile	Leu	Pro	140	145	150	

Phe Pro Leu Gln Leu Phe Cys Phe Leu Val Ala Ile Arg Val Pro
155 160 165

Phe Pro Trp Thr Val Trp Arg Lys Thr Glu Ala Gly Val Trp Asp
170 175 180

<210> 294

<211> 1164

<212> DNA

<213> Homo sapiens

<400> 294

cttctgtagg acagtcacca ggccagatcc agaagcctct ctaggctcca 50
gctttctctg tggaagatga cagcaattat agcaggaccc tgccaggctg 100
tcgaaaagat tccgcaataa aactttgcca gtgggaagta cctagtga 150
cggcctaaga tgccacttct tctcatgtcc caggcttgag gccctgtggt 200
ccccatcctt gggagaagtc agctccagca ccatgaaggg catcctcggt 250
gctggtatca ctgcagtgtc tggtgcagct gtagaatctc tgagctgcgt 300
gcagtgtaat tcatgggaaa aatcctgtgt caacagcatt gcctctgaat 350
gtccctcaca tgccaacacc agctgtatca gctcctcagc cagctcctct 400
ctagagacac cagtcagatt ataccagaat atgttctgct cagcggagaa 450
ctgcagtgag gagacacaca ttacagcctt cactgtccac gtgtctgctg 500
aagaacactt tcatttttga agccagtgtc gccaaaggaaa ggaatgcagc 550
aacaccagcg atgccctgga cctccctctg aagaacgtgt ccagcaacgc 600
agagtgccct gcttggtatg aatctaattg aacttctgt cgtgggaagc 650
cctggaaatg ctatgaagaa gaacagtgtg tctttctagt tgcagaactt 700
aagaatgaca ttgagtctaa gagtctcgtg ctgaaaggct gttccaacgt 750
cagtaacgcc acctgtcagt tcctgtctgg tgaaaacaag actcttgag 800
gagtcattctt tcgaaagttt gagtgtgcaa atgtaaacag ctttaacccc 850
acgtctgcac caaccacttc ccacaacgtg ggctccaaag cttccctcta 900
cctcttggcc cttgccagcc tccttcttcg gggactgctg cctgaggtc 950
ctggggctgc actttgccca gcacccatt tctgcttctc tgaggtccag 1000
agcaccacct gcggtgctga caccctcttt cctgctctg ccccgtttaa 1050
ctgccagta agtgggagtc acaggtctcc aggcaatgcc gacagctgcc 1100
ttgttcttca ttattaaagc actggttcat tcactgcaa aaaaaaaaaa 1150
aaaaaaaaaa aaaa 1164

<210> 295

<211> 237

<212> PRT

<213> Homo sapiens

<400> 295

Met	Lys	Gly	Ile	Leu	Val	Ala	Gly	Ile	Thr	Ala	Val	Leu	Val	Ala	
1				5					10					15	
Ala	Val	Glu	Ser	Leu	Ser	Cys	Val	Gln	Cys	Asn	Ser	Trp	Glu	Lys	
				20					25					30	
Ser	Cys	Val	Asn	Ser	Ile	Ala	Ser	Glu	Cys	Pro	Ser	His	Ala	Asn	
				35					40					45	
Thr	Ser	Cys	Ile	Ser	Ser	Ser	Ala	Ser	Ser	Ser	Leu	Glu	Thr	Pro	
				50					55					60	
Val	Arg	Leu	Tyr	Gln	Asn	Met	Phe	Cys	Ser	Ala	Glu	Asn	Cys	Ser	
				65					70					75	
Glu	Glu	Thr	His	Ile	Thr	Ala	Phe	Thr	Val	His	Val	Ser	Ala	Glu	
				80					85					90	
Glu	His	Phe	His	Phe	Val	Ser	Gln	Cys	Cys	Gln	Gly	Lys	Glu	Cys	
				95					100					105	
Ser	Asn	Thr	Ser	Asp	Ala	Leu	Asp	Pro	Pro	Leu	Lys	Asn	Val	Ser	
				110					115					120	
Ser	Asn	Ala	Glu	Cys	Pro	Ala	Cys	Tyr	Glu	Ser	Asn	Gly	Thr	Ser	
				125					130					135	
Cys	Arg	Gly	Lys	Pro	Trp	Lys	Cys	Tyr	Glu	Glu	Glu	Gln	Cys	Val	
				140					145					150	
Phe	Leu	Val	Ala	Glu	Leu	Lys	Asn	Asp	Ile	Glu	Ser	Lys	Ser	Leu	
				155					160					165	
Val	Leu	Lys	Gly	Cys	Ser	Asn	Val	Ser	Asn	Ala	Thr	Cys	Gln	Phe	
				170					175					180	
Leu	Ser	Gly	Glu	Asn	Lys	Thr	Leu	Gly	Gly	Val	Ile	Phe	Arg	Lys	
				185					190					195	
Phe	Glu	Cys	Ala	Asn	Val	Asn	Ser	Leu	Thr	Pro	Thr	Ser	Ala	Pro	
				200					205					210	
Thr	Thr	Ser	His	Asn	Val	Gly	Ser	Lys	Ala	Ser	Leu	Tyr	Leu	Leu	
				215					220					225	
Ala	Leu	Ala	Ser	Leu	Leu	Leu	Arg	Gly	Leu	Leu	Pro				
				230					235						

<210> 296

<211> 1245

<212> DNA

<213> Homo sapiens

<400> 296

ggcctcggtt caaacgaccc ggtgggtcta cagcggaagg gagggagcga 50
aggtaggagg cagggcttgc ctactggcc accctcccaa cccaagagc 100
ccagcccat ggtccccgcc gccggcgcgc tgctgtgggt cctgctgctg 150

aatctgggtc cccgggcggc gggggcccaa ggcctgaccc agactccgac 200
cgaaatgcag cgggtcagtt tacgctttgg gggcccatg acccgagct 250
accggagcac cgcccgact ggtcttcccc ggaagacaag gataatccta 300
gaggacgaga atgatgccat ggccgacgcc gaccgcctgg ctggaccagc 350
ggctgccgag ctcttggccg ccacgggtgc caccggcttt agccggtcgt 400
ccgccattaa cgaggaggat gggctttcag aagaggggggt tgtgattaat 450
gccggaaagg atagcaccag cagagagctt cccagtgcga ctccaatac 500
agcggggagt tccagcacga ggtttatagc caatagtcag gagcctgaaa 550
tcaggctgac ttcaagcctg ccgcgctccc ccgggaggtc tactgaggac 600
ctgccaggct cgcaggccac cctgagccag tggccacac ctgggtctac 650
cccgagccgg tggccgtcac cctcaccac agccatgcca tctcctgagg 700
atctgcccgt ggtgctgatg ccctggggcc cgtggcactg cactgcaag 750
tcgggcacca tgagccggag ccggtctggg aagctgcacg gcctttccgg 800
ggccttcga gttggggcgc tgagccagct ccgcacggag cacaagcctt 850
gcacctatca acaatgtccc tgcaaccgac ttcggaaga gtgcccctg 900
gacacaagtc tctgtactga caccaactgt gcctctcaga gcaccaccag 950
taccaggacc accactaccc cttccccac catccacctc agaagcagtc 1000
ccagcctgcc acccgccagc ccctgccag ccctggcttt ttggaaacgg 1050
gtcaggattg gcctggagga tatttggaat agcctctctt cagtgttcac 1100
agagatgcaa ccaatagaca gaaaccagag gtaatggcca cttcatccac 1150
atgaggagat gtcagtatct caacctctct tgcctttca atcctagcac 1200
ccactagata ttttagtac agaaaaacaa aactggaaaa caca 1245

<210> 297

<211> 341

<212> PRT

<213> Homo sapiens

<400> 297

Met	Val	Pro	Ala	Ala	Gly	Ala	Leu	Leu	Trp	Val	Leu	Leu	Leu	Asn
1				5					10					15
Leu	Gly	Pro	Arg	Ala	Ala	Gly	Ala	Gln	Gly	Leu	Thr	Gln	Thr	Pro
				20					25					30
Thr	Glu	Met	Gln	Arg	Val	Ser	Leu	Arg	Phe	Gly	Gly	Pro	Met	Thr
				35					40					45
Arg	Ser	Tyr	Arg	Ser	Thr	Ala	Arg	Thr	Gly	Leu	Pro	Arg	Lys	Thr
				50					55					60
Arg	Ile	Ile	Leu	Glu	Asp	Glu	Asn	Asp	Ala	Met	Ala	Asp	Ala	Asp

cggttggtcc tgctagctgg ggcagcggcg ctggcgagcg gctcccaggg 100
 cgaccgtgag ccggtgtacc gcgactgcgt actgcagtgc gaagagcaga 150
 actgctctgg gggcgctctg aatcacttcc gctcccgcca gccaatctac 200
 atgagtctag caggctggac ctgtcgggac gactgtaagt atgagtgtat 250
 gtgggtcacc gttgggctct acctccagga aggtcacaaa gtgcctcagt 300
 tccatggcaa gtggcccttc tcccggttcc tgttctttca agagccggca 350
 tcggccgtgg cctcgtttct caatggcctg gccagcctgg tgatgctctg 400
 ccgctaccgc accttcgtgc cagcctcctc ccccatgtac cacacctgtg 450
 tggccttcgc ctgggtgtcc ctcaatgcat ggttctggtc cacagtcttc 500
 cacaccaggg aactgacct cacagagaaa atggactact totgtgcctc 550
 cactgtcatc ctacactcaa tctacctgtg ctgcgtcagg accgtggggc 600
 tgcagcaccg agctgtggtc agtgccttcc gggctctcct gctgctcatg 650
 ctgaccgtgc acgtctccta cctgagcctc atccgcttcg actatggcta 700
 caacctggtg gccaacgtgg ctattggcct ggtcaacgtg gtgtgggtggc 750
 tggcctggtg cctgtggaac cagcggcggc tgctcacgt gcgcaagtgc 800
 gtggtggtgg tcttgctgct gcaggggctg tccctgctcg agctgcttga 850
 cttcccaccg ctcttctggg tcttggatgc ccatgccatc tggcacatca 900
 gcaccatccc tgtccacgtc ctctttttca gctttctgga agatgacagc 950
 ctgtacctgc tgaaggaatc agaggacaag ttcaagctgg actgaagacc 1000
 ttggagcgag tctgccccag tggggatcct gccccgcgcc tgctggcctc 1050
 ctttctcccc tcaacccttg agatgatttt ctcttttcaa cttcttgaac 1100
 ttggacatga aggatgtggg ccagaaatca tgtggccagc ccaccccctg 1150
 ttggccctca ccagccttgg agtctgttct agggaaggcc tcccagcatc 1200
 tgggactcga gagtgggcag cccctctacc tccctggagct gaactggggg 1250
 ggaactgagt gtgttcttag ctctaccggg aggacagctg cctgtttcct 1300
 ccccaccagc ctctcccca catcccagc tgcttggtg ggtcctgaag 1350
 ccctctgtct acctgggaga ccagggacca caggccttag ggatacaggg 1400
 ggtcccttc tgttaccacc ccccaccctc ctccaggaca ccactaggtg 1450
 gtgctggatg cttgttcttt ggccagccaa ggttcacggc gattctcccc 1500
 atgggatctt gagggaccaa gctgctggga ttgggaagga gtttcacct 1550
 gaccgttgcc ctagccaggt tcccaggagg cctcaccata ctccccttca 1600
 gggccagggc tccagcaagc ccagggcaag gatcctgtgc tgctgtctgg 1650

ttgagagcct gccaccgtgt gtcgggagtg tgggccaggc tgagtgcata 1700
 ggtgacaggg ccgtagagcat gggcctgggt gtgtgtgagc tcaggcctag 1750
 gtgcgcagtg tggagacggg tgttgtcggg gaagagggtg ggcttcaaag 1800
 tgtgtgtgtg caggggggtg gtgtgttagc gtgggttagg ggaacgtgtg 1850
 tgcgcgtgct ggtgggcatg tgagatgagt gactgccggt gaatgtgtcc 1900
 acagttgaga ggttgaggca ggatgaggga atcctgtcac catcaataat 1950
 cacttggtga gcgccagctc tgcccaagac gccacctggg cggacagcca 2000
 ggagctctcc atggccaggc tgccctgtgt catgttccct gtctgggtgcc 2050
 cctttgcccg cctcctgcaa acctcacagg gtccccacac aacagtgcc 2100
 tccagaagca gcccctcgga ggcagaggaa ggaaaatggg gatggctggg 2150
 gctctctcca tcctcctttt ctccctgcct tcgcatggct ggccttcccc 2200
 tccaaaacct ccattcccct gctgccagcc cctttgccat agcctgattt 2250
 tggggaggag gaaggggcca tttgaggag aaggggagaa agcttatggc 2300
 tgggtctggt ttcttccctt ccagaggggt cttactgttc caggggtggc 2350
 ccagggcagg cagggggcac actatgcctg tgccctggta aaggtgacct 2400
 ctgccattta ccagcagccc tggcatgttc ctgcccaca ggaatagaat 2450
 ggaggagct ccagaaactt tccatcccaa aggcagtctc cgtgggttga 2500
 gcagactgga tttttgctct gccctgacc ccttgtccct ctttgaggga 2550
 ggggagctat gctaggactc caacctcagg gactcgggtg gcctgcgcta 2600
 gcttcttttg atactgaaaa cttttaaggt gggaggggtg caagggatgt 2650
 gcttaataaa tcaattccaa gcctcaaaaa aaaaaaaaaa aa 2692

<210> 299

<211> 320

<212> PRT

<213> Homo sapiens

<400> 299

Met	Ala	Gly	Leu	Ala	Ala	Arg	Leu	Val	Leu	Leu	Ala	Gly	Ala	Ala
1				5					10					15
Ala	Leu	Ala	Ser	Gly	Ser	Gln	Gly	Asp	Arg	Glu	Pro	Val	Tyr	Arg
				20					25					30
Asp	Cys	Val	Leu	Gln	Cys	Glu	Glu	Gln	Asn	Cys	Ser	Gly	Gly	Ala
				35					40					45
Leu	Asn	His	Phe	Arg	Ser	Arg	Gln	Pro	Ile	Tyr	Met	Ser	Leu	Ala
				50					55					60
Gly	Trp	Thr	Cys	Arg	Asp	Asp	Cys	Lys	Tyr	Glu	Cys	Met	Trp	Val
				65					70					75

Thr	Val	Gly	Leu	Tyr	Leu	Gln	Glu	Gly	His	Lys	Val	Pro	Gln	Phe	
				80					85					90	
His	Gly	Lys	Trp	Pro	Phe	Ser	Arg	Phe	Leu	Phe	Phe	Gln	Glu	Pro	
				95					100					105	
Ala	Ser	Ala	Val	Ala	Ser	Phe	Leu	Asn	Gly	Leu	Ala	Ser	Leu	Val	
				110					115					120	
Met	Leu	Cys	Arg	Tyr	Arg	Thr	Phe	Val	Pro	Ala	Ser	Ser	Pro	Met	
				125					130					135	
Tyr	His	Thr	Cys	Val	Ala	Phe	Ala	Trp	Val	Ser	Leu	Asn	Ala	Trp	
				140					145					150	
Phe	Trp	Ser	Thr	Val	Phe	His	Thr	Arg	Asp	Thr	Asp	Leu	Thr	Glu	
				155					160					165	
Lys	Met	Asp	Tyr	Phe	Cys	Ala	Ser	Thr	Val	Ile	Leu	His	Ser	Ile	
				170					175					180	
Tyr	Leu	Cys	Cys	Val	Arg	Thr	Val	Gly	Leu	Gln	His	Pro	Ala	Val	
				185					190					195	
Val	Ser	Ala	Phe	Arg	Ala	Leu	Leu	Leu	Leu	Met	Leu	Thr	Val	His	
				200					205					210	
Val	Ser	Tyr	Leu	Ser	Leu	Ile	Arg	Phe	Asp	Tyr	Gly	Tyr	Asn	Leu	
				215					220					225	
Val	Ala	Asn	Val	Ala	Ile	Gly	Leu	Val	Asn	Val	Val	Trp	Trp	Leu	
				230					235					240	
Ala	Trp	Cys	Leu	Trp	Asn	Gln	Arg	Arg	Leu	Pro	His	Val	Arg	Lys	
				245					250					255	
Cys	Val	Val	Val	Val	Leu	Leu	Leu	Gln	Gly	Leu	Ser	Leu	Leu	Glu	
				260					265					270	
Leu	Leu	Asp	Phe	Pro	Pro	Leu	Phe	Trp	Val	Leu	Asp	Ala	His	Ala	
				275					280					285	
Ile	Trp	His	Ile	Ser	Thr	Ile	Pro	Val	His	Val	Leu	Phe	Phe	Ser	
				290					295					300	
Phe	Leu	Glu	Asp	Asp	Ser	Leu	Tyr	Leu	Leu	Lys	Glu	Ser	Glu	Asp	
				305					310					315	
Lys	Phe	Lys	Leu	Asp											
				320											

<210> 300

<211> 1674

<212> DNA

<213> Homo sapiens

<400> 300

ggccgcctgg aattgtggga gttgtgtctg ccactcggct gccggaggcc 50

gaaggctcgt gactatggct cccagagcc tgccttcac taggatggct 100

cctctgggca tgctgcttgg gctgctgatg gccgcctgct tcaccttctg 150

cctcagtcacat cagaacctga aggagtttgc cctgaccaac ccagagaaga 200
gcagcaccaa agaaacggag agaaaagaaa ccaaagccga ggaggagctg 250
gatgccgaag tcctggaggt gttccacccg acgcatgagt ggcaggccct 300
tcagccaggg caggctgtcc ctgcaggatc ccacgtacgg ctgaatcttc 350
agactgggga aagagaggca aaactccaat atgaggacaa gttccgaaat 400
aatttgaaag gcaaaaggct ggatatcaac accaacacct acacatctca 450
ggatctcaag agtgactgg caaaattcaa ggagggggca gagatggaga 500
gttcaaagga agacaaggca aggaggctg aggtaaagcg gctcttccgc 550
cccattgagg aactgaagaa agactttgat gagctgaatg ttgtcattga 600
gactgacatg cagatcatgg tacggctgat caacaagttc aatagttcca 650
gctccagttt ggaagagaag attgctgcgc tctttgatct tgaatattat 700
gtccatcaga tggacaatgc gcaggacctg ctttcctttg gtggtcttca 750
agtggatgac aatgggctga acagcacaga gccctcctg aaggagtatg 800
ctgcgtttgt gctgggcgct gccttttcca gcaaccccaa ggtccagggtg 850
gaggccatcg aagggggagc cctgcagaag ctgctggtca tcctggccac 900
ggagcagccg ctactgcaa agaagaaggc cctgtttgca ctgtgctccc 950
tgctgcgcca cttcccctat gccagcggc agttcctgaa gctcggggg 1000
ctgcaggctc tgaggacct ggtgcaggag aagggcacgg aggtgctcgc 1050
cgtgcgcgtg gtcacactgc tctacgacct ggtcacggag aagatgttcg 1100
ccgaggagga ggctgagctg acccaggaga tgtcccaga gaagctgcag 1150
cagtatcgcc aggtacacct cctgccaggc ctgtgggaac agggctggtg 1200
cgagatcacg gccacacctc tggcgtgcc cgagcatgat gcccgtaga 1250
aggtgctgca gacactgggc gtcctcctga ccacctgcc ggaccgctac 1300
cgtcaggacc ccagctcgg caggacactg gccagcctgc aggtgagta 1350
ccaggtgctg gccagcctg agctgcagga tggtagaggac gagggtact 1400
tccaggagct gctgggctct gtcaacagct tgctgaagga gctgagatga 1450
ggccccacac caggactgga ctgggatgcc gctagtgagg ctgaggggtg 1500
ccagcgtggg tgggttctc aggcaggagg acatcttggc agtgctggct 1550
tggccattaa atggaaacct gaaggccaaa aaaaaaaaaa aaaaaaaaaa 1600
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650
aaaaaaaaaa aaaaaaaaaa aaaa 1674

<210> 301

<211> 461
 <212> PRT
 <213> Homo sapiens

<400> 301

Met	Ala	Pro	Gln	Ser	Leu	Pro	Ser	Ser	Arg	Met	Ala	Pro	Leu	Gly	1	5	10	15
Met	Leu	Leu	Gly	Leu	Leu	Met	Ala	Ala	Cys	Phe	Thr	Phe	Cys	Leu	20	25	30	
Ser	His	Gln	Asn	Leu	Lys	Glu	Phe	Ala	Leu	Thr	Asn	Pro	Glu	Lys	35	40	45	
Ser	Ser	Thr	Lys	Glu	Thr	Glu	Arg	Lys	Glu	Thr	Lys	Ala	Glu	Glu	50	55	60	
Glu	Leu	Asp	Ala	Glu	Val	Leu	Glu	Val	Phe	His	Pro	Thr	His	Glu	65	70	75	
Trp	Gln	Ala	Leu	Gln	Pro	Gly	Gln	Ala	Val	Pro	Ala	Gly	Ser	His	80	85	90	
Val	Arg	Leu	Asn	Leu	Gln	Thr	Gly	Glu	Arg	Glu	Ala	Lys	Leu	Gln	95	100	105	
Tyr	Glu	Asp	Lys	Phe	Arg	Asn	Asn	Leu	Lys	Gly	Lys	Arg	Leu	Asp	110	115	120	
Ile	Asn	Thr	Asn	Thr	Tyr	Thr	Ser	Gln	Asp	Leu	Lys	Ser	Ala	Leu	125	130	135	
Ala	Lys	Phe	Lys	Glu	Gly	Ala	Glu	Met	Glu	Ser	Ser	Lys	Glu	Asp	140	145	150	
Lys	Ala	Arg	Gln	Ala	Glu	Val	Lys	Arg	Leu	Phe	Arg	Pro	Ile	Glu	155	160	165	
Glu	Leu	Lys	Lys	Asp	Phe	Asp	Glu	Leu	Asn	Val	Val	Ile	Glu	Thr	170	175	180	
Asp	Met	Gln	Ile	Met	Val	Arg	Leu	Ile	Asn	Lys	Phe	Asn	Ser	Ser	185	190	195	
Ser	Ser	Ser	Leu	Glu	Glu	Lys	Ile	Ala	Ala	Leu	Phe	Asp	Leu	Glu	200	205	210	
Tyr	Tyr	Val	His	Gln	Met	Asp	Asn	Ala	Gln	Asp	Leu	Leu	Ser	Phe	215	220	225	
Gly	Gly	Leu	Gln	Val	Val	Ile	Asn	Gly	Leu	Asn	Ser	Thr	Glu	Pro	230	235	240	
Leu	Val	Lys	Glu	Tyr	Ala	Ala	Phe	Val	Leu	Gly	Ala	Ala	Phe	Ser	245	250	255	
Ser	Asn	Pro	Lys	Val	Gln	Val	Glu	Ala	Ile	Glu	Gly	Gly	Ala	Leu	260	265	270	
Gln	Lys	Leu	Leu	Val	Ile	Leu	Ala	Thr	Glu	Gln	Pro	Leu	Thr	Ala	275	280	285	
Lys	Lys	Lys	Val	Leu	Phe	Ala	Leu	Cys	Ser	Leu	Leu	Arg	His	Phe				

	290	295	300
Pro Tyr Ala Gln	Arg Gln Phe Leu Lys	Leu Gly Gly Leu Gln	Val
	305	310	315
Leu Arg Thr Leu	Val Gln Glu Lys Gly	Thr Glu Val Leu Ala	Val
	320	325	330
Arg Val Val Thr	Leu Leu Tyr Asp Leu	Val Thr Glu Lys Met	Phe
	335	340	345
Ala Glu Glu Glu	Ala Glu Leu Thr Gln	Glu Met Ser Pro Glu	Lys
	350	355	360
Leu Gln Gln Tyr	Arg Gln Val His Leu	Leu Pro Gly Leu Trp	Glu
	365	370	375
Gln Gly Trp Cys	Glu Ile Thr Ala His	Leu Leu Ala Leu Pro	Glu
	380	385	390
His Asp Ala Arg	Glu Lys Val Leu Gln	Thr Leu Gly Val Leu	Leu
	395	400	405
Thr Thr Cys Arg	Asp Arg Tyr Arg Gln	Asp Pro Gln Leu Gly	Arg
	410	415	420
Thr Leu Ala Ser	Leu Gln Ala Glu Tyr	Gln Val Leu Ala Ser	Leu
	425	430	435
Glu Leu Gln Asp	Gly Glu Asp Glu Gly	Tyr Phe Gln Glu Leu	Leu
	440	445	450
Gly Ser Val Asn	Ser Leu Leu Lys Glu	Leu Arg	
	455	460	

<210> 302

<211> 2136

<212> DNA

<213> Homo sapiens

<400> 302

```

ttcggcttcc gtagaggaag tggcgcgac cttcatttgg ggtttcgggtt 50
cccccccttc cccttccccg gggctctgggg gtgacattgc accgcgcccc 100
tcgtgggggtc gcgttgccac cccacgcgga ctccccagct ggcgcgcccc 150
tcccatttgc ctgtcctggt caggccccca ccccccttcc cacctgacca 200
gccatggggg ctgcggtggt ttctggctgc actttcgtcg cgttcggccc 250
ggccttcgcg cttttcttga tcaactgtggc tggggaccgc cttcgcgtta 300
tcacctcgtg cgcaggggca tttttctggc tgggtctcct gctcctggcc 350
tctgtgggtc ggttcattt ggtccatgtg accgaccggt cagatgcccc 400
gctccagtac ggctcctga tttttggtgc tgctgtctct gtccttctac 450
aggaggtggt ccgctttgcc tactacaagc tgcttaagaa ggcagatgaa 500
gggtagcat cgctgagtga ggacggaaga tcacccatct ccatccgcca 550

```

gatggcctat gtttctggtc tctccttcgg tatcatcagt ggtgtcttct 600
ctgttatcaa tattttggct gatgcacttg ggccaggtgt ggttgggac 650
catggagact caccctatta ctctctgact tcagcctttc tgacagcagc 700
cattatcctg ctccatacct tttggggagt tgtgttcttt gatgcctgtg 750
agaggagacg gtactgggct ttgggcctgg tggttgggag tcacctactg 800
acatcgggac tgacattcct gaacccttg tatgaggcca gcctgctgcc 850
catctatgca gtcactgttt ccatggggct ctgggccttc atcacagctg 900
gagggtecct ccgaagtatt cagcgcagcc tcttgtgtaa ggactgacta 950
cctggactga tcgcctgaca gatccacact gcctgtccac tgcccatgac 1000
tgagcccagc cccagcccgg gtccattgcc cacattctct gtctccttct 1050
cgtcggctca cccactacc tccagggttt tgctttgtcc ttttgtgacc 1100
gttagtctct aagctttacc aggagcagcc tgggttcagc cagtcaagtga 1150
ctggtgggtt tgaatctgca cttatcccca ccacctggg acccccttgt 1200
tgtgtccagg actccccctg tgtcagtgt ctgctctcac cctgcccagg 1250
actcacctcc cttcccctct gcaggccgac ggcaggagga cagtcgggtg 1300
atggtgtatt ctgccctgcg catccacccc gaggactgag ggaacctagg 1350
ggggaccctt gggcctgggg tgccctcctg atgtcctcgc cctgtatttc 1400
tccatctcca gttctggaca gtgcaggttg ccaagaaaag ggacctagtt 1450
tagccattgc cctggagatg aaattaatgg aggcctcaagg atagatgagc 1500
tctgagtttc tcagtaactc ctcaagactg gacatcttgg tctttttctc 1550
aggcctgagg gggaaccatt tttggtgtga taaataccct aaactgcctt 1600
tttttctttt ttgaggtggg gggagggagg aggtatattg gaactcttct 1650
aacctccttg ggctatattt totctcctcg agttgtcct catggctggg 1700
ctcatttcgg tccctttctc cttggtccca gacctgggg gaaaggaagg 1750
aagtgcattg ttgggaactg gcattactgg aactaatggt tttaacctcc 1800
ttaaccacca gcatccctcc totccccaag gtgaagtgga ggggtgctgtg 1850
gtgagctggc cactccagag ctgcagtgcc actggaggag tcagactacc 1900
atgacatcgt aggaaggag gggagatttt tttgtagttt ttaattgggg 1950
tgtgggaggg gcggggaggt tttctataaa ctgtatcatt ttctgctgag 2000
ggtggagtgt cccatccttt taatcaagg gattgtgatt ttgactaata 2050
aaaaagaatt tgtaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2100
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa 2136

<210> 303
 <211> 247
 <212> PRT
 <213> Homo sapiens

<400> 303

Met	Gly	Ala	Ala	Val	Phe	Phe	Gly	Cys	Thr	Phe	Val	Ala	Phe	Gly	
1				5					10					15	
Pro	Ala	Phe	Ala	Leu	Phe	Leu	Ile	Thr	Val	Ala	Gly	Asp	Pro	Leu	
				20					25					30	
Arg	Val	Ile	Ile	Leu	Val	Ala	Gly	Ala	Phe	Phe	Trp	Leu	Val	Ser	
				35					40					45	
Leu	Leu	Leu	Ala	Ser	Val	Val	Trp	Phe	Ile	Leu	Val	His	Val	Thr	
				50					55					60	
Asp	Arg	Ser	Asp	Ala	Arg	Leu	Gln	Tyr	Gly	Leu	Leu	Ile	Phe	Gly	
				65					70					75	
Ala	Ala	Val	Ser	Val	Leu	Leu	Gln	Glu	Val	Phe	Arg	Phe	Ala	Tyr	
				80					85					90	
Tyr	Lys	Leu	Leu	Lys	Lys	Ala	Asp	Glu	Gly	Leu	Ala	Ser	Leu	Ser	
				95					100					105	
Glu	Asp	Gly	Arg	Ser	Pro	Ile	Ser	Ile	Arg	Gln	Met	Ala	Tyr	Val	
				110					115					120	
Ser	Gly	Leu	Ser	Phe	Gly	Ile	Ile	Ser	Gly	Val	Phe	Ser	Val	Ile	
				125					130					135	
Asn	Ile	Leu	Ala	Asp	Ala	Leu	Gly	Pro	Gly	Val	Val	Gly	Ile	His	
				140					145					150	
Gly	Asp	Ser	Pro	Tyr	Tyr	Phe	Leu	Thr	Ser	Ala	Phe	Leu	Thr	Ala	
				155					160					165	
Ala	Ile	Ile	Leu	Leu	His	Thr	Phe	Trp	Gly	Val	Val	Phe	Phe	Asp	
				170					175					180	
Ala	Cys	Glu	Arg	Arg	Arg	Tyr	Trp	Ala	Leu	Gly	Leu	Val	Val	Gly	
				185					190					195	
Ser	His	Leu	Leu	Thr	Ser	Gly	Leu	Thr	Phe	Leu	Asn	Pro	Trp	Tyr	
				200					205					210	
Glu	Ala	Ser	Leu	Leu	Pro	Ile	Tyr	Ala	Val	Thr	Val	Ser	Met	Gly	
				215					220					225	
Leu	Trp	Ala	Phe	Ile	Thr	Ala	Gly	Gly	Ser	Leu	Arg	Ser	Ile	Gln	
				230					235					240	
Arg	Ser	Leu	Leu	Cys	Lys	Asp									
				245											

<210> 304
 <211> 240
 <212> DNA
 <213> Homo sapiens

<220>

<221> unsure
<222> 108, 123, 126, 154, 198, 206, 217
<223> unknown base

<400> 304
aagctggttt aaggaagcag aggaggggta gattcgttga gtgaggacgg 50
aagatcaacc catttccatt ccgccagatg gcctatgttt ctggtctctc 100
ccttcgggnat catcagtggg gtnttntctg ttatcaatat tttggctgat 150
gcanttgggc caggtgtggg tgggatccat ggagactcac cctattantt 200
cctganttca gccttntga cagcagccat tctctgctc 240

<210> 305
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 58, 94, 132, 186, 191, 220, 240, 248, 280, 311, 332
<223> unknown base

<400> 305
gaccgaccgt tcagatgccc ggttccagta cggcttcctg atttttggtg 50
ctgctgtntc tgtccttcta caggaggtgt tccgctttgc ctantacaag 100
ctgcttaaga aggcagatga ggggtagca tngctgagtg aggacggaag 150
atcacccatt tccatccgcc agatggccta tgttnttggg ntttccttcg 200
gtatcatcag tgggtgtttt tctgttatca atattttggn tgatgcantt 250
gggccaggtg tgggtgggat ccatggagan tcaccctatt aattcctgaa 300
ttcagccttt ntgcagcag ccattatcct gntccatacc ttttggggag 350
ttgtgttttt tgatgcctgt gagaggag 378

<210> 306
<211> 655
<212> DNA
<213> Homo sapiens

<220>
<221> unsure
<222> 1, 22, 129, 133, 184
<223> unknown base

<400> 306
ngttggagaa gtggcgcgga cnttcatttg gggtttcggt ttccccctt 50
tccctttccc cggggtctgg ggtgacattg cacgggcccc tcgtggggtc 100
gcgttgccac cccacgcgga ctcccagnt ggngcgccct tcccatttgc 150
ctgtcctggt caggccccca ccccccttc cacntgacca gccatggggg 200
ctgcggtgtt tttcggctgc actttcgtcg cgttcggccc ggccttcgag 250

cttttcttga tcaactgtggc tggggacccg cttcgcgtta tcatcctgg 300
 cgcaggggca tttttctggc tgggtctccct gctcctggcc tctgtgggtct 350
 ggttcattctt ggtccatgtg accgaccggg cagatgcccg gctccagtac 400
 ggcctcctga tttttgggtg tgctgtctct gtccttctac aggaggtgtt 450
 ccgctttgcc tactacaagc tgcttaagaa ggcagatgag gggtttagcat 500
 cgctgagtga ggacggaaga taccatctt ccatccgcc gatggcctat 550
 gtttctgggtc tctccttcgg tatcatcagt ggtgtcttct ctgttatcaa 600
 tattttgggt gatgcacttg ggccagggtg ggttgggato catggagact 650
 ccccc 655

<210> 307

<211> 650

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 52, 89, 128

<223> unknown base

<400> 307

gtaaaagaaa gtggccggac cttcattggg gtttcgggtc ccccccttcc 50
 cnttccccgg ggtctggggg tgacattgca ccgcgccnt cgtgggggtcg 100
 cgttgccacc ccacgcggac tccccagntg gcgcgccct cccatttgcc 150
 tgtcctgggtc aggccccac ccccccttcc acctgaccag ccatgggggc 200
 tgcgggtgtt ttcgggctgc actttcgtcg cgttcggggc cggccttcgc 250
 gcttttcttg atcaactgtg ctggggaccc gcttcgcgtt atcatcctgg 300
 tcgcaggggc atttttctgg ctgggtctcc tgctcctggc ctctgtgggtc 350
 tggttcatct tggccatgt gaccgaccgg tcagatgcc ggctccagta 400
 cggcctcctg atttttgggt ctgctgtctc tgccttcta caggaggtgt 450
 tccgctttgc ctactacaag ctgcttaaga aggcagatga ggggttagca 500
 tcgctgagtg aggacggaag atcaccatc tocatccgcc agatggccta 550
 tgtttctgggt ctctccttcg gtatcatcag tgggtgtctc tctgttatca 600
 atattttggc tgatgcactt gggccagggt tggttgggat ccatggagac 650

<210> 308

<211> 1570

<212> DNA

<213> Homo sapiens

<400> 308

gccccaggga gcagtgggtg gttataactc aggcccggtg cccagagccc 50

aggaggaggc agtggccagg aaggcacagg cctgagaagt ctgcggtga 100
 gctgggagca aatccccac cccctacctg ggggacaggg caagtgagac 150
 ctggtgaggg tggctcagca ggcaggaag gagaggtgtc tgtgcgtcct 200
 gcacccacat ctttctctgt cccctccttg ccctgtctgg aggtgctag 250
 actcctatct tctgaattct atagtgcctg ggtctcagcg cagtgccgat 300
 ggtggcccggt ccttgtggtt cctctctacc tggggaaata aggtgcagcg 350
 gccatggcta cagcaagacc cccctggatg tgggtgctct gtgctctgat 400
 cacagccttg cttctggggg tcacagagca tgttctogcc aacaatgatg 450
 tttcctgtga ccacccctct aacaccgtgc cctctgggag caaccaggac 500
 ctgggagctg gggccgggga agacgcccgg tcggatgaca gcagcagccg 550
 catcatcaat ggatccgact gcgatatgca caccagccg tggcaggccg 600
 cgctgttgct aaggcccaac cagctctact gcggggcggt gttggtgcat 650
 ccacagtggc tgctcacggc cgcccactgc aggaagaaag ttttcagagt 700
 ccgtctcggc cactactccc tgctaccagt ttatgaatct gggcagcaga 750
 tgttccaggg ggtcaaatcc atccccacc ctggctactc ccaccctggc 800
 cactctaacg acctcatgct catcaaactg aacagaagaa ttcgtccac 850
 taaagatgtc agacccatca acgtctcctc tcattgtccc tctgctggga 900
 caaagtgtt ggtgtctggc tgggggacaa ccaagagccc ccaagtgcac 950
 ttccctaagg tcctccagt cttgaatata agcgtgctaa gtcagaaaag 1000
 gtgcgaggat gcttaccga gacagataga tgacaccatg ttctgcgccg 1050
 gtgacaaagc aggtagagac tcctgccagg gtgattctgg ggggcctgtg 1100
 gtctgcaatg gctccctgca gggactcgtg tcctggggag attacccttg 1150
 tgcccggccc aacagaccgg gtgtctacac gaacctctgc aagttcacca 1200
 agtgatcca ggaaccatc caggccaact cctgagtcac ccaggactc 1250
 agcacaccg catccccacc tgctgcaggg acagccctga cactcctttc 1300
 agaccctcat tcctcccag agatgttgag aatgttcac tctccagccc 1350
 ctgaccccat gtctcctgga ctacgggtct gcttccccca cattgggctg 1400
 accgtgtctc tctagttgaa ccctgggaac aatttccaaa actgtccagg 1450
 gcggggggtt cgtctcaatc tcctggggc actttcatcc tcaagctcag 1500
 ggcccatccc ttctctgcag ctctgacca aatttagtcc cagaaataaa 1550
 ctgagaagtg gaaaaaaaaa 1570

<210> 309

<211> 293
 <212> PRT
 <213> Homo sapiens

<400> 309

Met	Ala	Thr	Ala	Arg	Pro	Pro	Trp	Met	Trp	Val	Leu	Cys	Ala	Leu	
1				5					10					15	
Ile	Thr	Ala	Leu	Leu	Leu	Gly	Val	Thr	Glu	His	Val	Leu	Ala	Asn	
			20						25					30	
Asn	Asp	Val	Ser	Cys	Asp	His	Pro	Ser	Asn	Thr	Val	Pro	Ser	Gly	
				35					40					45	
Ser	Asn	Gln	Asp	Leu	Gly	Ala	Gly	Ala	Gly	Glu	Asp	Ala	Arg	Ser	
				50					55					60	
Asp	Asp	Ser	Ser	Ser	Arg	Ile	Ile	Asn	Gly	Ser	Asp	Cys	Asp	Met	
				65					70					75	
His	Thr	Gln	Pro	Trp	Gln	Ala	Ala	Leu	Leu	Leu	Arg	Pro	Asn	Gln	
				80					85					90	
Leu	Tyr	Cys	Gly	Ala	Val	Leu	Val	His	Pro	Gln	Trp	Leu	Leu	Thr	
				95					100					105	
Ala	Ala	His	Cys	Arg	Lys	Lys	Val	Phe	Arg	Val	Arg	Leu	Gly	His	
				110					115					120	
Tyr	Ser	Leu	Ser	Pro	Val	Tyr	Glu	Ser	Gly	Gln	Gln	Met	Phe	Gln	
				125					130					135	
Gly	Val	Lys	Ser	Ile	Pro	His	Pro	Gly	Tyr	Ser	His	Pro	Gly	His	
				140					145					150	
Ser	Asn	Asp	Leu	Met	Leu	Ile	Lys	Leu	Asn	Arg	Arg	Ile	Arg	Pro	
				155					160					165	
Thr	Lys	Asp	Val	Arg	Pro	Ile	Asn	Val	Ser	Ser	His	Cys	Pro	Ser	
				170					175					180	
Ala	Gly	Thr	Lys	Cys	Leu	Val	Ser	Gly	Trp	Gly	Thr	Thr	Lys	Ser	
				185					190					195	
Pro	Gln	Val	His	Phe	Pro	Lys	Val	Leu	Gln	Cys	Leu	Asn	Ile	Ser	
				200					205					210	
Val	Leu	Ser	Gln	Lys	Arg	Cys	Glu	Asp	Ala	Tyr	Pro	Arg	Gln	Ile	
				215					220					225	
Asp	Asp	Thr	Met	Phe	Cys	Ala	Gly	Asp	Lys	Ala	Gly	Arg	Asp	Ser	
				230					235					240	
Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Val	Val	Cys	Asn	Gly	Ser	Leu	
				245					250					255	
Gln	Gly	Leu	Val	Ser	Trp	Gly	Asp	Tyr	Pro	Cys	Ala	Arg	Pro	Asn	
				260					265					270	
Arg	Pro	Gly	Val	Tyr	Thr	Asn	Leu	Cys	Lys	Phe	Thr	Lys	Trp	Ile	
				275					280					285	
Gln	Glu	Thr	Ile	Gln	Ala	Asn	Ser								

<210> 310
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 310
 tcctgtgacc acccctctaa cacc 24

<210> 311
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 311
 ctggaacatc tgctgcccag attc 24

<210> 312
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 312
 gtcggatgac agcagcagcc gcatcatcaa tggatccgac tgcgatatgc 50

<210> 313
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 313
 atggtcaacg accggtggaa gaccatgggc ggcgctgccc aacttgagga 50
 ccggccgcgc gacaagccgc agcggccgag ctgcggctac gtgctgtgca 100
 ccgtgctgct ggccctggct gtgctgctgg ctgtagctgt caccggtgcc 150
 gtgctcttcc tgaaccacgc ccacgcgccg ggcacggcgc cccacctgt 200
 cgtcagcact ggggctgcca gcgccaacag cgccctggtc actgtggaaa 250
 gggcggacag ctgcacctc agcatcctca ttgaccgcgc ctgccccgac 300
 ctacccgaca gcttcgcacg cctggagagc gccaggcct cgggtgctgca 350
 ggcgctgaca gagcaccagg ccagccacg gctggtgggc gaccaggagc 400
 aggagctgct ggacacgctg gccgaccagc tgccccggct gctggccoga 450
 gcctcagagc tgcagacgga gtgcatgggg ctgcggaagg ggcattggcac 500
 gctgggccag ggcctcagcg ccctgcagag tgagcagggc cgcctcatcc 550

agctttctctc tgagagccag ggccacatgg ctcacctggt gaactccgtc 600
 agcgacatcc tggatgccct gcagagggac cgggggctgg gccggccccg 650
 caacaaggcc gaccttcaga gagcgctgc ccggggaacc cggccccggg 700
 gctgtgccac tggctcccgg ccccgagact gtctggacgt cctcctaagc 750
 ggacagcagg acgatggcgt ctactctgtc tttcccaccc actaccggc 800
 cggcttccag gtgtactgtg acatgcgcac ggacggcggc ggctggacgg 850
 tgtttcagcg ccgggaggac ggctccgtga acttcttcg gggctgggac 900
 gcgtaccgag acggctttgg caggctcacc ggggagcact ggctagggct 950
 caagaggatc cacgccctga ccacacaggc tgcctacgag ctgcacgtgg 1000
 acctggagga ctttgagaat ggcacggcct atgcccgcta cgggagcttc 1050
 ggcgtgggct tgttctccgt ggaccctgag gaagacgggt acccgctcac 1100
 cgtggctgac tattccggca ctgcaggcga ctccctcctg aagcacagcg 1150
 gcatgagggt caccaccaag gaccgtgaca gcgaccattc agagaacaac 1200
 tgtgccgcct tctaccggg tgcctggtgg taccgcaact gccacacgtc 1250
 caacctcaat gggcagtacc tgcgcggtgc gcacgcctcc tatgccgacg 1300
 gcgtggagtg gtccctcctgg accggctggc agtactcact caagttctct 1350
 gagatgaaga tccggccggc ccgggaggac cgctagactg gtgcaccttg 1400
 tccttgggcc tgctgggtccc tgtcgcccca tccccgaccc cacctcactc 1450
 tttcgtgaat gttctccacc cacctgtgcc tggcggaccc actctccagt 1500
 agggagggggc cgggccatcc ctgacacgaa gctccctggg ccggtgaagt 1550
 cacacatgc cttctcgccg tccccacccc ctccatttgg cagctcactg 1600
 atctcttgcc tctgctgatg ggggctggca aacttgacga ccccaactcc 1650
 tgcctgcccc cactgtgact ccggtgctgt ttgccgtccc ctggccagga 1700
 tggtgaggtc tgccccaggc accctctgcc ctgcccggcc aaatacccg 1750
 cattatgggg acagagagca gggggcagac agcaccctg gagtctcct 1800
 agcagatcgt ggggaatgtc aggtctctct gaggtcaggt ctgaggccag 1850
 tatcctccag cctcccaat gccaaacccc acccgtttc cctggtgccc 1900
 agagaacca cctctcccc aagggcctca gcctggctgt gggctgggtg 1950
 gccccatcct accaggccct gaggtcagga tggggagctg ctgcctttgg 2000
 ggaccacgc tccaaggctg agaccagttc cctggaggcc acccaccctg 2050
 tgccccggca ggctgggggt ctgcagtcct cttacctgct gtgcccacct 2100
 gctctctgtc tcaaagagg cccaacccat cccccacca gctcccggcc 2150

gtctctctac ctggggcagc cggggctgcc atcccatttc tcctgcctct 2200
 ggaaggctggg tggggccctg caccgtgggg ctggactgcg ctaatgggaa 2250
 gctcttggtt ttctgggctg gggcctaggc agggctggga tgaggcttgt 2300
 acaacccccca ccaccaattt ccagggaact ccagggtcct gaggcctccc 2350
 aggagggcct tgggggtgat gaccccttcc ctgaggtggc tgtctccatg 2400
 aggaggccaa cccttgccat tgaccgtggc cacctggacc caggccaggc 2450
 ccggccccggc gagtggtaaa gggacaggga ccacotcacc gggcaaatag 2500
 ggtcgggggg actggggcac cagaccaggc accacctgga cactttcttg 2550
 ttgaatcttc ccaacaccca gcacgtgtc atcccactc cttgtgtgca 2600
 cacatgcaga ggtgagacct gcaggctccc aggaccagca gccacaaggg 2650
 cagggtgga gccgggtcct cagctgtctg ctcagcagcc ctggaccgcg 2700
 gtgcgttacg tcaggccagc atgcaggggc gcttttccaa ggcctcctga 2750
 tgggggcctc cgaaagggtt ggagtcagcc ttggggagct gcctagcagc 2800
 ctctcctcgg gcaggagggg aggtggcttc ctocaaagga caccgatgg 2850
 cagggtgccta gggggtgtgg ggttccgttc tcccttcccc tccactgaa 2900
 gtttgtgctt aaaaaacaat aaatttgact tggcaccact gggggttgg 2950
 gggagaggcc gtgtgacctg gctctctgtc ccagtgccac caggatcatc 3000
 acatgcgcag 3010

<210> 314
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 314
 Met Val Asn Asp Arg Trp Lys Thr Met Gly Gly Ala Ala Gln Leu
 1 5 10 15
 Glu Asp Arg Pro Arg Asp Lys Pro Gln Arg Pro Ser Cys Gly Tyr
 20 25 30
 Val Leu Cys Thr Val Leu Leu Ala Leu Ala Val Leu Leu Ala Val
 35 40 45
 Ala Val Thr Gly Ala Val Leu Phe Leu Asn His Ala His Ala Pro
 50 55 60
 Gly Thr Ala Pro Pro Pro Val Val Ser Thr Gly Ala Ala Ser Ala
 65 70 75
 Asn Ser Ala Leu Val Thr Val Glu Arg Ala Asp Ser Ser His Leu
 80 85 90
 Ser Ile Leu Ile Asp Pro Arg Cys Pro Asp Leu Thr Asp Ser Phe
 95 100 105

Ala Arg Leu Glu Ser Ala Gln Ala Ser Val Leu Gln Ala Leu Thr	110	115	120
Glu His Gln Ala Gln Pro Arg Leu Val Gly Asp Gln Glu Gln Glu	125	130	135
Leu Leu Asp Thr Leu Ala Asp Gln Leu Pro Arg Leu Leu Ala Arg	140	145	150
Ala Ser Glu Leu Gln Thr Glu Cys Met Gly Leu Arg Lys Gly His	155	160	165
Gly Thr Leu Gly Gln Gly Leu Ser Ala Leu Gln Ser Glu Gln Gly	170	175	180
Arg Leu Ile Gln Leu Leu Ser Glu Ser Gln Gly His Met Ala His	185	190	195
Leu Val Asn Ser Val Ser Asp Ile Leu Asp Ala Leu Gln Arg Asp	200	205	210
Arg Gly Leu Gly Arg Pro Arg Asn Lys Ala Asp Leu Gln Arg Ala	215	220	225
Pro Ala Arg Gly Thr Arg Pro Arg Gly Cys Ala Thr Gly Ser Arg	230	235	240
Pro Arg Asp Cys Leu Asp Val Leu Leu Ser Gly Gln Gln Asp Asp	245	250	255
Gly Val Tyr Ser Val Phe Pro Thr His Tyr Pro Ala Gly Phe Gln	260	265	270
Val Tyr Cys Asp Met Arg Thr Asp Gly Gly Gly Trp Thr Val Phe	275	280	285
Gln Arg Arg Glu Asp Gly Ser Val Asn Phe Phe Arg Gly Trp Asp	290	295	300
Ala Tyr Arg Asp Gly Phe Gly Arg Leu Thr Gly Glu His Trp Leu	305	310	315
Gly Leu Lys Arg Ile His Ala Leu Thr Thr Gln Ala Ala Tyr Glu	320	325	330
Leu His Val Asp Leu Glu Asp Phe Glu Asn Gly Thr Ala Tyr Ala	335	340	345
Arg Tyr Gly Ser Phe Gly Val Gly Leu Phe Ser Val Asp Pro Glu	350	355	360
Glu Asp Gly Tyr Pro Leu Thr Val Ala Asp Tyr Ser Gly Thr Ala	365	370	375
Gly Asp Ser Leu Leu Lys His Ser Gly Met Arg Phe Thr Thr Lys	380	385	390
Asp Arg Asp Ser Asp His Ser Glu Asn Asn Cys Ala Ala Phe Tyr	395	400	405
Arg Gly Ala Trp Trp Tyr Arg Asn Cys His Thr Ser Asn Leu Asn	410	415	420

Gly Gln Tyr Leu Arg Gly Ala His Ala Ser Tyr Ala Asp Gly Val
425 430 435

Glu Trp Ser Ser Trp Thr Gly Trp Gln Tyr Ser Leu Lys Phe Ser
440 445 450

Glu Met Lys Ile Arg Pro Val Arg Glu Asp Arg
455 460

<210> 315
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 315
cacacgtcca acctcaatgg gcag 24

<210> 316
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 316
gaccagcagg gcccaaggaca agg 23

<210> 317
<211> 44
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 317
gttctctgag atgaagatcc ggccgggtccg ggagtaccgc ttag 44

<210> 318
<211> 1841
<212> DNA
<213> Homo sapiens

<400> 318
gcagtcagag acttccccctg cccctcgctg ggaaagaaca ttaggaatgc 50
cttttagtgc cttgcttcct gaactagctc acagtagccc ggcggcccag 100
ggcaatccga ccacatttca ctctaccgc ttaggaatc cagatgcagg 150
ccaagtacag cagcacgagg gacatgctgg atgatgatgg ggacaccacc 200
atgagcctgc attctcaagc ctctgccaca actcggcatc cagagccccg 250
gcgcacagag cacagggctc cctcttcaac gtggcgacca gtggccctga 300
ccctgctgac tttgtgcttg gtgctgctga tagggctggc agccctgggg 350
cttttgtttt ttcagtacta ccagctctcc aatactggtc aagacaccat 400

ttctcaaatg gaagaaagat taggaaatac gtcccaagag ttgcaatctc 450
 ttcaagtcca gaatataaag cttgcaggaa gtctgcagca tgtggctgaa 500
 aaactctgtc gtgagctgta taacaaagct ggagcacaca ggtgcagccc 550
 ttgtacagaa caatggaaat ggcattggaga caattgctac cagttctata 600
 aagacagcaa aagttgggag gactgtaaat atttctgcct tagtgaaaac 650
 tctaccatgc tgaagataaa caaacaagaa gacctggaat ttgccgcgtc 700
 tcagagctac tctgagtttt tctactctta ttggacaggg cttttgcgcc 750
 ctgacagtgg caaggcctgg ctgtggatgg atggaacccc tttcacttct 800
 gaactgttcc atattataat agatgtcacc agcccaagaa gcagagactg 850
 tgtggccatc ctcaatggga tgatottctc aaaggactgc aaagaattga 900
 agcgttgtgt ctgtgagaga agggcaggaa tggatgaagcc agagagcctc 950
 catgtccccc ctgaaacatt aggcgaaggt gactgattcg ccctctgcaa 1000
 ctacaaatag cagagtgagc caggcgggtgc caaagcaagg gctagttgag 1050
 acattgggaa atggaacata atcaggaaag actatctctc tgactagtag 1100
 aaaatgggtt ctctgttttc ctgttcaggga tcaccagcat ttctgagctt 1150
 gggtttatgc acgtatttaa cagtcacaag aagtcttatt tacatgccac 1200
 caaccaacct cagaaaccca taatgtcatc tgccttcttg gcttagagat 1250
 aacttttagc tctctttctt ctcaatgtct aatatcacct ccctgttttc 1300
 atgtcttctt tacacttggg ggaataagaa actttttgaa gtagaggaaa 1350
 tacattgagg taacatcctt ttctctgaca gtcaagtagt ccatcagaaa 1400
 ttggcagtca cttcccagat tgtaccagca aatacacaag gaattctttt 1450
 tgtttgtttc agttcatact agtcccttcc caatccatca gtaaagaccc 1500
 catctgcctt gtccatgccg tttcccaaca gggatgtcac ttgatatgag 1550
 aatctcaaat ctcaatgcct tataagcatt ccttcctgtg tccattaaga 1600
 ctctgataat tgtctccctt ccataggaat ttctcccagg aaagaaatat 1650
 atcccatctt ccgtttcata tcagaactac cgtccccgat attcccttca 1700
 gagagattaa agaccagaaa aaagtgagcc tcttcatctg cacctgtaat 1750
 agtttcagtt cctattttct tccattgacc catatttata cctttcaggt 1800
 actgaagatt taataataat aaatgtaaat actgtgaaaa a 1841

<210> 319
 <211> 280
 <212> PRT
 <213> Homo sapiens

<400> 319

Met	Gln	Ala	Lys	Tyr	Ser	Ser	Thr	Arg	Asp	Met	Leu	Asp	Asp	Asp	
1				5					10					15	
Gly	Asp	Thr	Thr	Met	Ser	Leu	His	Ser	Gln	Ala	Ser	Ala	Thr	Thr	
				20					25					30	
Arg	His	Pro	Glu	Pro	Arg	Arg	Thr	Glu	His	Arg	Ala	Pro	Ser	Ser	
				35					40					45	
Thr	Trp	Arg	Pro	Val	Ala	Leu	Thr	Leu	Leu	Thr	Leu	Cys	Leu	Val	
				50					55					60	
Leu	Leu	Ile	Gly	Leu	Ala	Ala	Leu	Gly	Leu	Leu	Phe	Phe	Gln	Tyr	
				65					70					75	
Tyr	Gln	Leu	Ser	Asn	Thr	Gly	Gln	Asp	Thr	Ile	Ser	Gln	Met	Glu	
				80					85					90	
Glu	Arg	Leu	Gly	Asn	Thr	Ser	Gln	Glu	Leu	Gln	Ser	Leu	Gln	Val	
				95					100					105	
Gln	Asn	Ile	Lys	Leu	Ala	Gly	Ser	Leu	Gln	His	Val	Ala	Glu	Lys	
				110					115					120	
Leu	Cys	Arg	Glu	Leu	Tyr	Asn	Lys	Ala	Gly	Ala	His	Arg	Cys	Ser	
				125					130					135	
Pro	Cys	Thr	Glu	Gln	Trp	Lys	Trp	His	Gly	Asp	Asn	Cys	Tyr	Gln	
				140					145					150	
Phe	Tyr	Lys	Asp	Ser	Lys	Ser	Trp	Glu	Asp	Cys	Lys	Tyr	Phe	Cys	
				155					160					165	
Leu	Ser	Glu	Asn	Ser	Thr	Met	Leu	Lys	Ile	Asn	Lys	Gln	Glu	Asp	
				170					175					180	
Leu	Glu	Phe	Ala	Ala	Ser	Gln	Ser	Tyr	Ser	Glu	Phe	Phe	Tyr	Ser	
				185					190					195	
Tyr	Trp	Thr	Gly	Leu	Leu	Arg	Pro	Asp	Ser	Gly	Lys	Ala	Trp	Leu	
				200					205					210	
Trp	Met	Asp	Gly	Thr	Pro	Phe	Thr	Ser	Glu	Leu	Phe	His	Ile	Ile	
				215					220					225	
Ile	Asp	Val	Thr	Ser	Pro	Arg	Ser	Arg	Asp	Cys	Val	Ala	Ile	Leu	
				230					235					240	
Asn	Gly	Met	Ile	Phe	Ser	Lys	Asp	Cys	Lys	Glu	Leu	Lys	Arg	Cys	
				245					250					255	
Val	Cys	Glu	Arg	Arg	Ala	Gly	Met	Val	Lys	Pro	Glu	Ser	Leu	His	
				260					265					270	
Val	Pro	Pro	Glu	Thr	Leu	Gly	Glu	Gly	Asp						
				275					280						

<210> 320

<211> 468

<212> DNA

<213> Homo sapiens

<220>
<221> unsure
<222> 59, 95, 149, 331, 364, 438, 446
<223> unknown base

<400> 320
aattttcacc gctgtaggaa tccagatgca ggccaagtac agcagcacga 50
gggacatgnt ggatgatgat gggacaccac catgagcctg cattntcaag 100
cttttgccac aattcggcat ccagagcccc ggcgcacaga gcacagggnt 150
cctttttcaa cgtggcgacc agtggccctg accctgctga ctttgtgctt 200
ggtgctgctg atagggctgg cagccctggg gcttttgttt tttcagtact 250
accagctctc caatactggg caagacacca tttctcaaat ggaagaaaga 300
ttaggaaata cgtcccaaga gttgcaattt nttcaagtcc agaataaaa 350
gcttgacgga agtntgcagc atgtggctga aaaactctgt cgtgagctgt 400
ataacaaagc tggaggaact ttgaaggagg gcaaagtntc ctcatntact 450
atacacacac cacttccc 468

<210> 321
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 321
atgcaggcca agtacagcag cac 23

<210> 322
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 322
catgctgacg acttcctgca agc 23

<210> 323
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 323
ccacacagtc tctgcttctt ggg 23

<210> 324
<211> 40
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 324

atgctggatg atgatgggga caccaccatg agcctgcatt 40

<210> 325

<211> 2988

<212> DNA

<213> Homo sapiens

<400> 325

gccgagcgca agaaccctgc gcagcccaga gcagctgctg gaggggaatc 50
gaggcgcggc tccggggatt cggctcgggc cgctggctct gctctgcggg 100
gagggagcgg gcccggccgc ggggcccagag ccctccggat ccgccccctc 150
cccgggtcccg cccctcggga gactcctctg gctgctctgg gggttcgccg 200
gggcccgggga cccgcggtcc gggcgccatg cgggcatcgc tgctgctgtc 250
ggtgctgcgg cccgcagggc ccgtggccgt gggcatctcc ctgggcttca 300
ccctgagcct gctcagcgtc acctgggtgg aggagccgtg cggcccaggc 350
ccgccccaac ctggagactc tgagctgcog ccgcgcggca acaccaacgc 400
ggcgcgccgg cccaactcgg tgcagcccgg agcggagcgc gagaagcccg 450
gggcccggcga aggcgcccgg gagaattggg agccgcgcgt cttgccctac 500
caccctgcac agcccggcca ggccgcaaa aaggccgtca ggaccgccta 550
catcagcacg gagctgggca tcaggcagag gctgctggtg gcggtgctga 600
cctctcagac cacgctgccc acgtggggcg tggccgtgaa ccgcacgctg 650
gggcaccggc tggagcgtgt ggtgttctct acgggcgcac ggggcccggc 700
ggccccacct ggcatggcag tggtgacgct gggcgaggag cgaccattg 750
gacacctgca cctggcgtg cgccacctgc tggagcagca cggcgacgac 800
tttgactggt tcttctctgt gcctgacacc acctacaccg aggcgcacgg 850
cctggcacgc ctaactggcc acctcagcct ggccctccgc gccacactgt 900
acctgggccc gccccaggac ttcatcggcg gagagcccac ccccggccgc 950
tactgccacg gaggctttgg ggtgctgctg tcgcgcatgc tgctgcaaca 1000
actgcgcccc cacctggaag gctgccgcaa cgacatcgtc agtgcgcgcc 1050
ctgacgagtg gctgggtcgc tgcattctcg atgccaccgg ggtgggctgc 1100
actggtgacc acgagggggg gcaactatagc catctggagc tgagccctgg 1150
ggagccagtg caggaggggg accctcattt ccgaagtgcc ctgacagccc 1200
accctgtgcg tgaccctgtg cacatgtacc agctgcacaa agctttcgcc 1250
cgagctgaac tggaacgcac gtaccaggag atccaggagt tacagtggga 1300

gatccagaat accagccatc tggccgttga tggggaccgg gcagctgctt 1350
ggcccgtggg tattccagca ccatcccgcg cggcctcccg ctttgagggtg 1400
ctgcgctggg actacttcac ggagcagcac gctttctcct gcgccgatgg 1450
ctcaccocgc tgccactgc gtggggctga ccgggctgat gtggccgatg 1500
ttctggggac agctctagag gagctgaacc gccgctacca cccggccttg 1550
cggtccaga agcagcagct ggtgaatggc taccgacgct ttgatccggc 1600
ccgggggatg gaatacacgc tggacttgca gctggaggca ctgaccccc 1650
agggaggccg cgggcccctc actcgccgag tgcagctgct ccggccgctg 1700
agccgcgtgg agatcttgcc tgtgccctat gtcactgagg cctcacgtct 1750
cactgtgctg ctgcctctag ctgcggctga gcgtgacctg gccctggct 1800
tcttgagggc ctttgccact gcagcactgg agcctgggtga tgctgcggca 1850
gccctgacct tgcctgact gtatgagccg cgccaggccc agcgcgtggc 1900
ccatgcagat gtcttcgcac ctgtcaaggc ccacgtggca gagctggagc 1950
ggcgtttccc cgggtcccgc gtgccatggc tcagtgtgca gacagccgca 2000
ccctcaccac tgcgcctcat ggatctactc tccaagaagc acccgctgga 2050
cacactgttc ctgctggccg ggccagacac ggtgctcacg cctgacttcc 2100
tgaaccgctg ccgcatgcat gccatctcog gctggcaggc cttctttccc 2150
atgcatttcc aagccttcca cccagggtgtg gccccaccac aagggcctgg 2200
gccccagag ctgggccgtg aactggccg ctttgatcgc caggcagcca 2250
gcgaggcctg cttctacaac tccgactacg tggcagcccg tgggcgcctg 2300
gcggcagcct cagaacaaga agaggagctg ctggagagcc tggatgtgta 2350
cgagctgttc ctccacttct ccagtctgca tgtgctgcgg gcggtggagc 2400
cggcgtgct gcagcgtac cgggcccaga cgtgcagcgc gaggctcagt 2450
gaggacctgt accaccgtg cctccagagc gtgcttgagg gcctcggctc 2500
ccgaaccag ctggccatgc tactctttga acaggagcag ggcaacagca 2550
cctgaccca cctgtcccc gtgggccgtg gcatggccac acccccccc 2600
acttctcccc caaaaccaga gccacctgcc agcctcgtg ggcagggctg 2650
gccgtagcca gacccaagc tggccactg gtcccctctc tggctctgtg 2700
ggtccctggg ctctggacaa gcactggggg acgtgcccc agagccaccc 2750
acttctcatc ccaaaccag tttccctgcc cctgacgct gctgattogg 2800
gctgtggcct ccacgtattt atgcagtaca gtctgcctga cgccagccct 2850
gcctctgggc cctgggggct gggctgtaga agagttgtg gggaaggagg 2900

gagctgagga gggggcatct cccaacttct cccttttgga ccctgccgaa 2950

gctccctgcc ttttaataaac tggccaagtg tggaaaaa 2988

<210> 326

<211> 775

<212> PRT

<213> Homo sapiens

<400> 326

Met	Arg	Ala	Ser	Leu	Leu	Leu	Ser	Val	Leu	Arg	Pro	Ala	Gly	Pro	
1				5					10					15	
Val	Ala	Val	Gly	Ile	Ser	Leu	Gly	Phe	Thr	Leu	Ser	Leu	Leu	Ser	
				20					25					30	
Val	Thr	Trp	Val	Glu	Glu	Pro	Cys	Gly	Pro	Gly	Pro	Pro	Gln	Pro	
				35					40					45	
Gly	Asp	Ser	Glu	Leu	Pro	Pro	Arg	Gly	Asn	Thr	Asn	Ala	Ala	Arg	
				50					55					60	
Arg	Pro	Asn	Ser	Val	Gln	Pro	Gly	Ala	Glu	Arg	Glu	Lys	Pro	Gly	
				65					70					75	
Ala	Gly	Glu	Gly	Ala	Gly	Glu	Asn	Trp	Glu	Pro	Arg	Val	Leu	Pro	
				80					85					90	
Tyr	His	Pro	Ala	Gln	Pro	Gly	Gln	Ala	Ala	Lys	Lys	Ala	Val	Arg	
				95					100					105	
Thr	Arg	Tyr	Ile	Ser	Thr	Glu	Leu	Gly	Ile	Arg	Gln	Arg	Leu	Leu	
				110					115					120	
Val	Ala	Val	Leu	Thr	Ser	Gln	Thr	Thr	Leu	Pro	Thr	Leu	Gly	Val	
				125					130					135	
Ala	Val	Asn	Arg	Thr	Leu	Gly	His	Arg	Leu	Glu	Arg	Val	Val	Phe	
				140					145					150	
Leu	Thr	Gly	Ala	Arg	Gly	Arg	Arg	Ala	Pro	Pro	Gly	Met	Ala	Val	
				155					160					165	
Val	Thr	Leu	Gly	Glu	Glu	Arg	Pro	Ile	Gly	His	Leu	His	Leu	Ala	
				170					175					180	
Leu	Arg	His	Leu	Leu	Glu	Gln	His	Gly	Asp	Asp	Phe	Asp	Trp	Phe	
				185					190					195	
Phe	Leu	Val	Pro	Asp	Thr	Thr	Tyr	Thr	Glu	Ala	His	Gly	Leu	Ala	
				200					205					210	
Arg	Leu	Thr	Gly	His	Leu	Ser	Leu	Ala	Ser	Ala	Ala	His	Leu	Tyr	
				215					220					225	
Leu	Gly	Arg	Pro	Gln	Asp	Phe	Ile	Gly	Gly	Glu	Pro	Thr	Pro	Gly	
				230					235					240	
Arg	Tyr	Cys	His	Gly	Gly	Phe	Gly	Val	Leu	Leu	Ser	Arg	Met	Leu	
				245					250					255	
Leu	Gln	Gln	Leu	Arg	Pro	His	Leu	Glu	Gly	Cys	Arg	Asn	Asp	Ile	
				260					265					270	

Val Ser Ala Arg	Pro Asp Glu Trp Leu Gly	Arg Cys Ile Leu Asp
	275	280 285
Ala Thr Gly Val	Gly Cys Thr Gly Asp His	Glu Gly Val His Tyr
	290	295 300
Ser His Leu Glu	Leu Ser Pro Gly Glu Pro	Val Gln Glu Gly Asp
	305	310 315
Pro His Phe Arg	Ser Ala Leu Thr Ala His	Pro Val Arg Asp Pro
	320	325 330
Val His Met Tyr	Gln Leu His Lys Ala Phe	Ala Arg Ala Glu Leu
	335	340 345
Glu Arg Thr Tyr	Gln Glu Ile Gln Glu Leu	Gln Trp Glu Ile Gln
	350	355 360
Asn Thr Ser His	Leu Ala Val Asp Gly Asp	Arg Ala Ala Ala Trp
	365	370 375
Pro Val Gly Ile	Pro Ala Pro Ser Arg Pro	Ala Ser Arg Phe Glu
	380	385 390
Val Leu Arg Trp	Asp Tyr Phe Thr Glu Gln	His Ala Phe Ser Cys
	395	400 405
Ala Asp Gly Ser	Pro Arg Cys Pro Leu Arg	Gly Ala Asp Arg Ala
	410	415 420
Asp Val Ala Asp	Val Leu Gly Thr Ala Leu	Glu Glu Leu Asn Arg
	425	430 435
Arg Tyr His Pro	Ala Leu Arg Leu Gln Lys	Gln Gln Leu Val Asn
	440	445 450
Gly Tyr Arg Arg	Phe Asp Pro Ala Arg Gly	Met Glu Tyr Thr Leu
	455	460 465
Asp Leu Gln Leu	Glu Ala Leu Thr Pro Gln	Gly Gly Arg Arg Pro
	470	475 480
Leu Thr Arg Arg	Val Gln Leu Leu Arg Pro	Leu Ser Arg Val Glu
	485	490 495
Ile Leu Pro Val	Pro Tyr Val Thr Glu Ala	Ser Arg Leu Thr Val
	500	505 510
Leu Leu Pro Leu	Ala Ala Ala Glu Arg Asp	Leu Ala Pro Gly Phe
	515	520 525
Leu Glu Ala Phe	Ala Thr Ala Ala Leu Glu	Pro Gly Asp Ala Ala
	530	535 540
Ala Ala Leu Thr	Leu Leu Leu Leu Tyr Glu	Pro Arg Gln Ala Gln
	545	550 555
Arg Val Ala His	Ala Asp Val Phe Ala Pro	Val Lys Ala His Val
	560	565 570
Ala Glu Leu Glu	Arg Arg Phe Pro Gly Ala	Arg Val Pro Trp Leu
	575	580 585

Ser Val Gln Thr	Ala Ala Pro Ser Pro	Leu Arg Leu Met Asp	Leu
	590	595	600
Leu Ser Lys Lys	His Pro Leu Asp Thr	Leu Phe Leu Leu Ala	Gly
	605	610	615
Pro Asp Thr Val	Leu Thr Pro Asp Phe	Leu Asn Arg Cys Arg	Met
	620	625	630
His Ala Ile Ser	Gly Trp Gln Ala Phe	Phe Pro Met His Phe	Gln
	635	640	645
Ala Phe His Pro	Gly Val Ala Pro Pro	Gln Gly Pro Gly Pro	Pro
	650	655	660
Glu Leu Gly Arg	Asp Thr Gly Arg Phe	Asp Arg Gln Ala Ala	Ser
	665	670	675
Glu Ala Cys Phe	Tyr Asn Ser Asp Tyr	Val Ala Ala Arg Gly	Arg
	680	685	690
Leu Ala Ala Ala	Ser Glu Gln Glu Glu	Glu Leu Leu Glu Ser	Leu
	695	700	705
Asp Val Tyr Glu	Leu Phe Leu His Phe	Ser Ser Leu His Val	Leu
	710	715	720
Arg Ala Val Glu	Pro Ala Leu Leu Gln	Arg Tyr Arg Ala Gln	Thr
	725	730	735
Cys Ser Ala Arg	Leu Ser Glu Asp Leu	Tyr His Arg Cys Leu	Gln
	740	745	750
Ser Val Leu Glu	Gly Leu Gly Ser Arg	Thr Gln Leu Ala Met	Leu
	755	760	765
Leu Phe Glu Gln	Glu Gln Gly Asn Ser	Thr	
	770	775	

<210> 327

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 327

tggaaggctg ccgcaacgac aatc 24

<210> 328

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 328

ctgatgtggc cgatgttctg 20

<210> 329

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 329
atggctcagt gtgcagacag 20

<210> 330
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 330
gcatgctgct ccgtgaagta gtcc 24

<210> 331
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 331
atgcatggga aagaaggcct gccc 24

<210> 332
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 332
tgcactggtg accacgaggg ggtgcactat agccatctgg agctgag 47

<210> 333
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 333
gctctggccg gccccggcga ttggtcaccg cccgctaggg gacagccctg 50
gcctcctctg attggcaagc gctggccacc tccccacacc ctttgcaac 100
gctcccctag tggagaaaag gagtagctat tagccaattc ggcagggcc 150
gctttttaga agcttgattt cctttgaaga tgaaagacta gcggaagctc 200
tgccctctttc occagtgggc gagggaaactc ggggcgattg gctgggaact 250
gtatccaccc aaatgtcacc gatttcttcc tatgcaggaa atgagcagac 300
ccatcaataa gaaatttctc agcctggccg aaaatggttg gcccacgaa 350
gccacgacaa ctggaggcaa agagggttgc tcaacgcccc gcctcattgg 400

aaaaccaa at cagatctggg acctatatag cgtggcggag gcggggcgat 450
 gattgtcgcg ctgcaccca ctgcagctgc gcacagtcgc atttctttcc 500
 ccgcccccta gaccctgcag caccatctgt catggcggct gggctgtttg 550
 gtttgagcgc tcgcgtctt ttggcggcag cggcgacgcg agggctcccc 600
 gccgccccgc tccgctggga atctagcttc tccaggactg tggtcgcccc 650
 gtccgctgtg gcgggaaagc ggccccca accgaccaca ccgtggcaag 700
 aggacccaga acccgaggac gaaaacttgt atgagaagaa cccagactcc 750
 catggttatg acaaggaccc cgttttggac gtctggaaca tgcgacttgt 800
 cttcttcttt ggcgctctca tcctcttgt ccttggcagc acctttgtgg 850
 cctatctgcc tgactacagg atgaaagagt ggtcccgccg cgaagctgag 900
 aggcttgtga aataccgaga ggccaatggc cttcccatca tggaatcaa 950
 ctgcttcgac ccagcaaga tccagctgcc agaggatgag tgaccagttg 1000
 ctaagtgggg ctcaagaagc accgccttcc ccaccccctg cctgccattc 1050
 tgacctcttc tcagagcacc taattaaagg ggctgaaagt ctgaa 1095

<210> 334
 <211> 153
 <212> PRT
 <213> Homo sapiens

<400> 334
 Met Ala Ala Gly Leu Phe Gly Leu Ser Ala Arg Arg Leu Leu Ala
 1 5 10 15
 Ala Ala Ala Thr Arg Gly Leu Pro Ala Ala Arg Val Arg Trp Glu
 20 25 30
 Ser Ser Phe Ser Arg Thr Val Val Ala Pro Ser Ala Val Ala Gly
 35 40 45
 Lys Arg Pro Pro Glu Pro Thr Thr Pro Trp Gln Glu Asp Pro Glu
 50 55 60
 Pro Glu Asp Glu Asn Leu Tyr Glu Lys Asn Pro Asp Ser His Gly
 65 70 75
 Tyr Asp Lys Asp Pro Val Leu Asp Val Trp Asn Met Arg Leu Val
 80 85 90
 Phe Phe Phe Gly Val Ser Ile Ile Leu Val Leu Gly Ser Thr Phe
 95 100 105
 Val Ala Tyr Leu Pro Asp Tyr Arg Met Lys Glu Trp Ser Arg Arg
 110 115 120
 Glu Ala Glu Arg Leu Val Lys Tyr Arg Glu Ala Asn Gly Leu Pro
 125 130 135
 Ile Met Glu Ser Asn Cys Phe Asp Pro Ser Lys Ile Gln Leu Pro
 140 145 150

Glu Asp Glu

<210> 335
<211> 442
<212> DNA
<213> Homo sapiens

<400> 335
ggcggctggg ctgtttggtt tgagcgctcg ccgtcttttg gcggcagcgg 50
cgacgcgagg gctcccggcc gcccgctcc gctgggaatc tagcttctcc 100
aggactgtgg tcgccccgtc cgctgtggcg ggaaagcggc cccagaacc 150
gaccacaccg tggcaaggagg acccagaacc cgaggacgaa aacttgatg 200
agaagaacct agactcccat ggttatgaca aggaccccg tttggacgtc 250
tggaacatgc gacttgcttt cttctttggc gtctccatca tcctggtcct 300
tggcagcacc tttgtggcct atctgcctga ctacaggatg aaagagtgg 350
cccgcgcga agctgagagg cttgtgaaat accgagaggc caatggcctt 400
cccatcatgg aatccaactg cttcgacccc agcaagatcc ag 442

<210> 336
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 336
ctgagaccct gcagcaccat ctg 23

<210> 337
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 337
ggtgcttctt gagccccact tagc 24

<210> 338
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 338
aatctagctt ctccaggact gtggtcgccc cgtccgctgt 40

<210> 339
<211> 2162
<212> DNA

<213> Homo sapiens

<400> 339

gcggcggtta tgccgcttgc tctgctcgtc ctgttgctcc tggggcccg 50
cggtgtgtgc cttgcagaac cccacgcga cagcctgcgg gaggaacttg 100
tcacacccc gctgccttcc ggggacgtag ccgccacatt ccagttccgc 150
acgcgctggg attcggagct tcagcgggaa ggagtgtccc attacaggct 200
ctttcccaaa gccctggggc agctgatctc caagtattct ctacgggagc 250
tgcacctgtc attcacacaa ggcttttgga ggacccgata ctgggggcca 300
cccttcctgc agggcccatc aggtgcagag ctgtgggtct ggttccaaga 350
cactgtcact gatgtggata aatcttgga ggagctcagt aatgtcctct 400
cagggatctt ctgcgcctct ctcaacttca tcgactccac caacacagtc 450
actcccaactg cctccttcaa acccctgggt ctggccaatg aactgacca 500
ctactttctg cgtatgtctg tgctgccgcg ggaggtggtc tgcaccgaaa 550
acctacccc ctggaagaag ctcttgccct gtagttcaa ggcaggcctc 600
tctgtgtgc tgaaggcaga tcgcttgctc cacaccagct accactcca 650
ggcagtgcac atccgccttg tttgcagaaa tgcacgctgt actagcatct 700
cctgggagct gaggcagacc ctgtcagttg tatttgatgc cttcatcacg 750
gggcagggaa agaaagactg gtccctcttc cggatgttct cccgaaccct 800
cacggagccc tgccccctgg cttcagagag ccgagtctat gtggacatca 850
ccacctaaa ccaggacaac gagacattag aggtgcaccc acccccgacc 900
actacatata aggaagtcac cctaggcact cggaagacct atgccatcta 950
tgacttgctt gacaccgcca tgatcaacaa ctctcgaaac ctcaacatcc 1000
agctcaagtg gaagagaccc ccagagaatg agggccccc agtgcccttc 1050
ctgcatgccc agcggtagct gagtggctat gggctgcaga agggggagct 1100
gagcacactg ctgtacaaca cccaccata ccgggccttc ccggtgctgc 1150
tgctggacac cgtaccctgg tatctgcggc tgtatgtgca caccctcacc 1200
atcacctcca agggcaagga gaacaaacca agttacatcc actaccagcc 1250
tgcccaggac cggtgcaac cccaactcct ggagatgctg attcagctgc 1300
cggccaactc agtcaccaag gtttccatcc agtttgagcg ggcgctgctg 1350
aagtggaccg agtacacgcc agatcctaac catggcttct atgtcagccc 1400
atctgtcctc agcgccttg tgcccagcat ggtagcagcc aagccagtgg 1450
actgggaaga gagtccctc ttcaacagcc tgttccagct ctctgatggc 1500

tctaactact ttgtgcggct ctacacggag cgcgtgctgg tgaacctgcc 1550
gacaccggac ttcagcatgc cctacaacgt gatctgcctc acgtgcactg 1600
tggtggccgt gtgctacggc tccttctaca atctcctcac ccgaaccttc 1650
cacatcgagg agccccgcac aggtggcctg gccaaagcggc tggccaacct 1700
tatccggcgc gcccgagggtg tccccccact ctgattcttg ccctttccag 1750
cagctgcagc tgccgtttct ctctggggag gggagcccaa gggctgtttc 1800
tgccacttgc tctcctcaga gttggctttt gaaccaaagt gccctggacc 1850
aggtcagggc ctacagctgt gttgtccagt acaggagcca cgagccaaat 1900
gtggcatttg aatttgaatt aacttagaaa ttcatttcct cacctgtagt 1950
ggccacctct atattgaggt gotcaataag caaaagtggc cgggtggctgc 2000
tgtattggac agcacagaaa aagatttcca tcaccacaga aaggtcggct 2050
ggcagcactg gccaaagtga tgggggtgtgc tacacagtgt atgtcactgt 2100
gtagtggatg gagtttactg tttgtggaat aaaaacggct gtttccgtgg 2150
aaaaaaaaaa aa 2162

<210> 340

<211> 574

<212> PRT

<213> Homo sapiens

<400> 340

Met	Pro	Leu	Ala	Leu	Leu	Val	Leu	Leu	Leu	Gly	Pro	Gly	Gly	
1				5					10				15	
Trp	Cys	Leu	Ala	Glu	Pro	Pro	Arg	Asp	Ser	Leu	Arg	Glu	Glu	Leu
				20					25					30
Val	Ile	Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	Gln
				35					40					45
Phe	Arg	Thr	Arg	Trp	Asp	Ser	Glu	Leu	Gln	Arg	Glu	Gly	Val	Ser
				50					55					60
His	Tyr	Arg	Leu	Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	Lys
				65					70					75
Tyr	Ser	Leu	Arg	Glu	Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	Trp
				80					85					90
Arg	Thr	Arg	Tyr	Trp	Gly	Pro	Pro	Phe	Leu	Gln	Ala	Pro	Ser	Gly
				95					100					105
Ala	Glu	Leu	Trp	Val	Trp	Phe	Gln	Asp	Thr	Val	Thr	Asp	Val	Asp
				110					115					120
Lys	Ser	Trp	Lys	Glu	Leu	Ser	Asn	Val	Leu	Ser	Gly	Ile	Phe	Cys
				125					130					135
Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr	Asn	Thr	Val	Thr	Pro	Thr
				140					145					150

Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn	Asp	Thr	Asp	His	Tyr	155	160	165
Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu	Val	Val	Cys	Thr	Glu	170	175	180
Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys	Ser	Ser	Lys	Ala	185	190	195
Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe	His	Thr	Ser	200	205	210
Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg	Asn	Ala	215	220	225
Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser	Val	230	235	240
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser	245	250	255
Leu	Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	260	265	270
Ala	Ser	Glu	Ser	Arg	Val	Tyr	Val	Asp	Ile	Thr	Thr	Tyr	Asn	Gln	275	280	285
Asp	Asn	Glu	Thr	Leu	Glu	Val	His	Pro	Pro	Pro	Thr	Thr	Thr	Tyr	290	295	300
Gln	Asp	Val	Ile	Leu	Gly	Thr	Arg	Lys	Thr	Tyr	Ala	Ile	Tyr	Asp	305	310	315
Leu	Leu	Asp	Thr	Ala	Met	Ile	Asn	Asn	Ser	Arg	Asn	Leu	Asn	Ile	320	325	330
Gln	Leu	Lys	Trp	Lys	Arg	Pro	Pro	Glu	Asn	Glu	Ala	Pro	Pro	Val	335	340	345
Pro	Phe	Leu	His	Ala	Gln	Arg	Tyr	Val	Ser	Gly	Tyr	Gly	Leu	Gln	350	355	360
Lys	Gly	Glu	Leu	Ser	Thr	Leu	Leu	Tyr	Asn	Thr	His	Pro	Tyr	Arg	365	370	375
Ala	Phe	Pro	Val	Leu	Leu	Leu	Asp	Thr	Val	Pro	Trp	Tyr	Leu	Arg	380	385	390
Leu	Tyr	Val	His	Thr	Leu	Thr	Ile	Thr	Ser	Lys	Gly	Lys	Glu	Asn	395	400	405
Lys	Pro	Ser	Tyr	Ile	His	Tyr	Gln	Pro	Ala	Gln	Asp	Arg	Leu	Gln	410	415	420
Pro	His	Leu	Leu	Glu	Met	Leu	Ile	Gln	Leu	Pro	Ala	Asn	Ser	Val	425	430	435
Thr	Lys	Val	Ser	Ile	Gln	Phe	Glu	Arg	Ala	Leu	Leu	Lys	Trp	Thr	440	445	450
Glu	Tyr	Thr	Pro	Asp	Pro	Asn	His	Gly	Phe	Tyr	Val	Ser	Pro	Ser	455	460	465

Val	Leu	Ser	Ala	Leu	Val	Pro	Ser	Met	Val	Ala	Ala	Lys	Pro	Val	
				470					475					480	
Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn	Ser	Leu	Phe	Pro	Val	Ser	
				485					490					495	
Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr	Thr	Glu	Pro	Leu	Leu	
				500					505					510	
Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro	Tyr	Asn	Val	Ile	
				515					520					525	
Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly	Ser	Phe	Tyr	
				530					535					540	
Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg	Thr	Gly	
				545					550					555	
Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg	Gly	
				560					565					570	

Val Pro Pro Leu

<210> 341
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 341
 tggacaccgt accctggtat ctgc 24

<210> 342
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> Artificial Sequence
 <222> 1-24
 <223> Synthetic oligonucleotide probe

<400> 342
 ccaactctga ggagagcaag tggc 24

<210> 343
 <211> 44
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 343
 tgtatgtgca caccctcacc atcacctcca agggcaagga gaac 44

<210> 344
 <211> 762
 <212> DNA
 <213> Homo sapiens

<400> 344
 caacatgggg tccagcagct tcttggctct catggtgtct ctcgttcttg 50
 tgacctggt ggctgtggaa ggagttaaag aggttataga gaaagcagg 100
 gtttggccag ctgacaacgt acgtgcttc aagtccgatc ctccccagt 150
 tcacacagac caggactgtc tgggggaaag gaagtgttgt tacctgcact 200
 gtggcttcaa gtgtgtgatt cctgtgaagg aactggaaga aggaggaaac 250
 aaggatgaag atgtgtcaag gccataccct gagccaggat gggaggccaa 300
 gtgtccaggc tctctctcta ccagggtgcc tcagaaatga tgctgggtcc 350
 tttctacctc tgggggtcac totcacttg cacctgcccc tgagggtcct 400
 gagacttga atatggaaga agcaataccc aacccaccca aagaaaacct 450
 gagcttgaag tccttttccc caaaaagagg gaagagtcac aaaaagtcca 500
 gaccccaggg acggtacttt cctctctac ctggtgctcc tccctaattg 550
 tcatgaatgg acccctcatg aatgaaacca gtgcccttat aagagacccc 600
 aaagagctgc cttgcccttc tgcaatgtgt gatcacagct agaaggcact 650
 gtcagagaag agaaactgg cctcaccaga tgctgaatct gctggtgcct 700
 tgatcttga cttcccagcc tctagaactg taagaaataa atatttgctg 750
 tttataatcc aa 762

<210> 345

<211> 111

<212> PRT

<213> Homo sapiens

<400> 345

Met	Gly	Ser	Ser	Ser	Phe	Leu	Val	Leu	Met	Val	Ser	Leu	Val	Leu
1				5					10					15
Val	Thr	Leu	Val	Ala	Val	Glu	Gly	Val	Lys	Glu	Gly	Ile	Glu	Lys
				20					25					30
Ala	Gly	Val	Cys	Pro	Ala	Asp	Asn	Val	Arg	Cys	Phe	Lys	Ser	Asp
				35					40					45
Pro	Pro	Gln	Cys	His	Thr	Asp	Gln	Asp	Cys	Leu	Gly	Glu	Arg	Lys
				50					55					60
Cys	Cys	Tyr	Leu	His	Cys	Gly	Phe	Lys	Cys	Val	Ile	Pro	Val	Lys
				65					70					75
Glu	Leu	Glu	Glu	Gly	Gly	Asn	Lys	Asp	Glu	Asp	Val	Ser	Arg	Pro
				80					85					90
Tyr	Pro	Glu	Pro	Gly	Trp	Glu	Ala	Lys	Cys	Pro	Gly	Ser	Ser	Ser
				95					100					105
Thr	Arg	Cys	Pro	Gln	Lys									
				110										

<210> 346
<211> 2528
<212> DNA
<213> Homo sapiens

<400> 346
aaactcagca cttgccggag tggctcattg ttaagacaaa ggggtgtgcac 50
ttcctggcca ggaaacctga gcggtgagac tcccagctgc ctacatcaag 100
gccccaggac atgcagaacc ttcctctaga acccgacca ccacatgag 150
gtcctgcctg tggagatgca ggcacctgag ccaaggcgtc cagtggtcct 200
tgcttctggc tgtcctggtc ttctttctct tgccttgcc ctcttttatt 250
aaggagcctc aaacaaagcc ttccaggcat caacgcacag agaacattaa 300
agaaaggtct ctacagtccc tggcaaagcc taagtcccag gcaccacaa 350
gggcgaggag gacaaccatc tatgcagagc cagcgccaga gaacaatgcc 400
ctcaacacac aaaccagcc caaggccac accaccggag acagaggaaa 450
ggaggccaac caggcaccgc cggaggagca ggacaagtg cccacacag 500
cacagagggc agcatggaag agcccagaaa aagagaaaac catggtgaac 550
aactgtcac ccagagggca agatgcaggg atggcctctg gcaggacaga 600
ggcacaatca tggagagcc aggacacaaa gacgaccac ggaaatgggg 650
gccagaccag gaagctgacg gcctccagga cgggtgtcaga gaagcaccag 700
ggcaaagcgg caaccacagc caagacgctc attcccaaaa gtcagcacag 750
aatgctggct cccacaggag cagtgtcaac aaggacgaga cagaaaggag 800
tgaccacagc agtcatocca cctaaggaga agaaacctca ggccacccca 850
ccccctgcc ctttccagag cccacgacg cagagaaacc aaagactgaa 900
ggccgccaac ttcaaactct agcctcgggt ggattttgag gaaaaatata 950
gcttcgaaat aggaggcctt cagacgactt gccctgactc tgtgaagatc 1000
aaagcctcca agtcgctgtg gctocagaaa ctctttctgc ccaacctcac 1050
tctcttctg gactccagac acttcaacca gagtgagtgg gaccgcctgg 1100
aacactttgc accaccctt ggcttcatgg agctcaacta ctcttggtg 1150
cagaaggtcg tgacacgctt ccctccagt cccagcagc agctgctcct 1200
ggccagcctc ccgctggga gcctccggtg catcacctgt gccgtgggtg 1250
gcaacggggg catcctgaac aactcccaca tgggccagga gatagacagt 1300
cacgactacg tgttccgatt gagcggagct ctcatataag gctacgaaca 1350
ggatgtgggg actcggacat ctttctacgg ctttaccgcc ttctccctga 1400
cccagtcact cttatatatt ggcaatcggg gtttcaagaa cgtgcctctt 1450

gggaaggacg tccgctactt gcacttcctg gaaggcaccg gggactatga 1500
 gtggctggaa gcactgctta tgaatcagac ggtgatgtca aaaaaccttt 1550
 tctggttcag gcacagaccc caggaagctt ttcgggaagc cctgcacatg 1600
 gacaggatcc tgttgctgca cccagacttt ctccgataca tgaagaacag 1650
 gttttctgagg tctaagaccc tggatgggtc cactggagg atataccgcc 1700
 ccaccactgg ggccttcctg ctgctcactg cccttcagct ctgtgaccag 1750
 gtgagtgtt atggcttcat cactgagggc catgagcgt tttctgatca 1800
 ctactatgat acatcatgga agcggctgat cttttacata aacctgact 1850
 tcaagctgga gagagaagtc tggaagcggc tacacgatga agggataatc 1900
 cggctgtacc agcgtcctgg tcccggaact gccaaagcca agaactgacc 1950
 ggggccaggg ctgccatggt ctccttgctt gctccaaggc acaggataca 2000
 gtgggaatct tgagactctt tggccatttc ccatgggtca gactaagctc 2050
 caagcccttc aggagtcca aggaacact tgaacctg acaagactct 2100
 ctcaagatgg caaatggcta attgaggttc tgaagttctt cagtacattg 2150
 ctgtaggtcc tgaggccagg gatttttaaat taaatggggt gatgggtggc 2200
 caataccaca attcctgctg aaaaacactc ttccagtcca aaagcttctt 2250
 gatacagaaa aaagagcctg gatttacaga aacatataga tctggtttga 2300
 attccagatc gagtttacag ttgtgaaatc ttgaaggtat tacttaactt 2350
 cactacagat tgtctagaag acctttctag gagttatctg attctagaag 2400
 ggtctatact tgtccttgct ttttaagctat ttgacaactc tacgtgttgt 2450
 agaaaactga taataatata aatgattgtt gtccatggaa aggcaaataa 2500
 attttctaca gtgaaaaaaaa aaaaaaaaa 2528

<210> 347
 <211> 600
 <212> PRT
 <213> Homo sapiens

<400> 347
 Met Arg Ser Cys Leu Trp Arg Cys Arg His Leu Ser Gln Gly Val
 1 5 10 15
 Gln Trp Ser Leu Leu Leu Ala Val Leu Val Phe Phe Leu Phe Ala
 20 25 30
 Leu Pro Ser Phe Ile Lys Glu Pro Gln Thr Lys Pro Ser Arg His
 35 40 45
 Gln Arg Thr Glu Asn Ile Lys Glu Arg Ser Leu Gln Ser Leu Ala
 50 55 60
 Lys Pro Lys Ser Gln Ala Pro Thr Arg Ala Arg Arg Thr Thr Ile

	380		385		390
Arg Leu Ser Gly	Ala Leu Ile Lys Gly	Tyr Glu Gln Asp Val Gly			
	395	400			405
Thr Arg Thr Ser	Phe Tyr Gly Phe Thr	Ala Phe Ser Leu Thr Gln			
	410	415			420
Ser Leu Leu Ile	Leu Gly Asn Arg Gly	Phe Lys Asn Val Pro Leu			
	425	430			435
Gly Lys Asp Val	Arg Tyr Leu His Phe	Leu Glu Gly Thr Arg Asp			
	440	445			450
Tyr Glu Trp Leu	Glu Ala Leu Leu Met	Asn Gln Thr Val Met Ser			
	455	460			465
Lys Asn Leu Phe	Trp Phe Arg His Arg	Pro Gln Glu Ala Phe Arg			
	470	475			480
Glu Ala Leu His	Met Asp Arg Tyr Leu	Leu Leu His Pro Asp Phe			
	485	490			495
Leu Arg Tyr Met	Lys Asn Arg Phe Leu	Arg Ser Lys Thr Leu Asp			
	500	505			510
Gly Ala His Trp	Arg Ile Tyr Arg Pro	Thr Thr Gly Ala Leu Leu			
	515	520			525
Leu Leu Thr Ala	Leu Gln Leu Cys Asp	Gln Val Ser Ala Tyr Gly			
	530	535			540
Phe Ile Thr Glu	Gly His Glu Arg Phe	Ser Asp His Tyr Tyr Asp			
	545	550			555
Thr Ser Trp Lys	Arg Leu Ile Phe Tyr	Ile Asn His Asp Phe Lys			
	560	565			570
Leu Glu Arg Glu	Val Trp Lys Arg Leu	His Asp Glu Gly Ile Ile			
	575	580			585
Arg Leu Tyr Gln	Arg Pro Gly Pro Gly	Thr Ala Lys Ala Lys Asn			
	590	595			600

<210> 348

<211> 496

<212> DNA

<213> Homo sapiens

<400> 348

```

cgatgcgcgg acccgggcac cccctcctcc tggggctgct gctgggtgctg 50
gggccttcgc cggagcagcg agtggaatt gttcctcgag atctgaggat 100
gaaggacaag tttctaaaac accttacagg ccctctttat tttagtccaa 150
agtgcagcaa acatttccat agactttatc acâacaccag agactgcacc 200
attcctgcat actataaaag atgcgccagg cttcttacct ggctggctgt 250
cagtccagtg tgcattggagg ataagtgagc agaccgtaca ggagcagcac 300
accaggagcc atgagaagtg ccttggaac caacagggaa acagaactat 350

```

ctttatacac atccccctcat ggacaagaga tttatttttg cagacagact 400
 cttccataag tcctttgagt tttgtatggt gttgacagtt tgcagatata 450
 tattcgataa atcagtgtagc ttgacagtgt tatctgtcac ttattt 496

<210> 349
 <211> 91
 <212> PRT
 <213> Homo sapiens

<400> 349
 Met Arg Gly Pro Gly His Pro Leu Leu Leu Gly Leu Leu Leu Val
 1 5 10 15
 Leu Gly Pro Ser Pro Glu Gln Arg Val Glu Ile Val Pro Arg Asp
 20 25 30
 Leu Arg Met Lys Asp Lys Phe Leu Lys His Leu Thr Gly Pro Leu
 35 40 45
 Tyr Phe Ser Pro Lys Cys Ser Lys His Phe His Arg Leu Tyr His
 50 55 60
 Asn Thr Arg Asp Cys Thr Ile Pro Ala Tyr Tyr Lys Arg Cys Ala
 65 70 75
 Arg Leu Leu Thr Arg Leu Ala Val Ser Pro Val Cys Met Glu Asp
 80 85 90

Lys

<210> 350
 <211> 1141
 <212> DNA
 <213> Homo sapiens

<400> 350
 gggctgggcc ccgcccgcagc tccagctggc cggtctggtc ctgcggtccc 50
 ttctctggga ggcccgcacc cggccgcgcc cagccccac catgccacc 100
 gcggggctcc gccggggcgc gccgctcacc gcaatcgctc tgttggtgct 150
 gggggctccc ctggtgctgg ccggcgagga ctgcctgtgg tacctggacc 200
 ggaatggctc ctggcatccg gggtttaact gcgagttctt caccttctgc 250
 tgccgggacct gctaccatcg gtactgctgc agggacctga ccttgcttat 300
 caccgagagg cagcagaagc actgcctggc cttcagcccc aagaccatag 350
 caggcatcgc ctcagctgtg atcctctttg ttgctgtggt tgccaccacc 400
 atctgctgct tcctctgttc ctgttgctac ctgtaccgcc ggccgagca 450
 gctccagagc ccatttgaag gccaggagat tccaatgaca ggcatcccag 500
 tgcagccagt ataccatac cccaggacc ccaaagctgg ccctgcaccc 550
 ccacagcctg gcttcatgta cccacctagt ggtcctgctc cccaatatcc 600

actctaccca gctgggcccc cagtctacaa ccctgcagct cctcctccct 650
 atatgccacc acagccctct taccogggag cctgaggaac cagccatgtc 700
 tctgctgccc cttcagtgat gccaaccttg ggagatgccc tcatcctgta 750
 cctgcatctg gtcctggggg tggcaggagt cctccagcca ccaggcccca 800
 gaccaagcca agccctgggc cctactgggg acagagcccc aggggaagtgg 850
 aacaggagct gaactagaac tatgaggggt tggggggagg gcttggaatt 900
 atgggctatt tttactgggg gcaagggagg gagatgacag cctgggtcac 950
 agtgcctgtt ttcaaatagt ccctctgctc ccaagatccc agccaggaag 1000
 gctggggccc tactgtttgt ccctctggg ctgggggtggg gggagggagg 1050
 aggttccgtc agcagctggc agtagccctc ctctctggct gcccactgg 1100
 ccacatctct ggctgctag attaaagctg taaagacaaa a 1141

<210> 351

<211> 197

<212> PRT

<213> Homo sapiens

<400> 351

Met	Pro	Pro	Ala	Gly	Leu	Arg	Arg	Ala	Ala	Pro	Leu	Thr	Ala	Ile	1	5	10	15
Ala	Leu	Leu	Val	Leu	Gly	Ala	Pro	Leu	Val	Leu	Ala	Gly	Glu	Asp	20	25	30	
Cys	Leu	Trp	Tyr	Leu	Asp	Arg	Asn	Gly	Ser	Trp	His	Pro	Gly	Phe	35	40	45	
Asn	Cys	Glu	Phe	Phe	Thr	Phe	Cys	Cys	Gly	Thr	Cys	Tyr	His	Arg	50	55	60	
Tyr	Cys	Cys	Arg	Asp	Leu	Thr	Leu	Leu	Ile	Thr	Glu	Arg	Gln	Gln	65	70	75	
Lys	His	Cys	Leu	Ala	Phe	Ser	Pro	Lys	Thr	Ile	Ala	Gly	Ile	Ala	80	85	90	
Ser	Ala	Val	Ile	Leu	Phe	Val	Ala	Val	Val	Ala	Thr	Thr	Ile	Cys	95	100	105	
Cys	Phe	Leu	Cys	Ser	Cys	Cys	Tyr	Leu	Tyr	Arg	Arg	Arg	Gln	Gln	110	115	120	
Leu	Gln	Ser	Pro	Phe	Glu	Gly	Gln	Glu	Ile	Pro	Met	Thr	Gly	Ile	125	130	135	
Pro	Val	Gln	Pro	Val	Tyr	Pro	Tyr	Pro	Gln	Asp	Pro	Lys	Ala	Gly	140	145	150	
Pro	Ala	Pro	Pro	Gln	Pro	Gly	Phe	Met	Tyr	Pro	Pro	Ser	Gly	Pro	155	160	165	
Ala	Pro	Gln	Tyr	Pro	Leu	Tyr	Pro	Ala	Gly	Pro	Pro	Val	Tyr	Asn	170	175	180	

Pro Ala Ala Pro Pro Pro Tyr Met Pro Pro Gln Pro Ser Tyr Pro
 185 190 195

Gly Ala

<210> 352
 <211> 3226
 <212> DNA
 <213> Homo sapiens

<400> 352
 gggggagcta ggccggcggc agtgggtggtg gcggcgggcg aagggtgagg 50
 gcggccccag aaccccaggt aggtagagca agaagatggt gtttctgccc 100
 ctcaaagtgt cccttgcaac catgtcattt ctactttcct cactgttggc 150
 tctcttaact gtgtccactc cttcatggtg tcagagcact gaagcatctc 200
 caaacgtag tgatgggaca ccatttcctt ggaataaaat acgacttcct 250
 gagtacgtca tcccagttca ttatgatctc ttgatccatg caaaccttac 300
 cacgctgacc ttctggggaa ccacgaaagt agaaatcaca gccagtcagc 350
 ccaccagcac catcatcctg catagtcacc acctgcagat atctagggcc 400
 accctcagga agggagctgg agagaggcta tcggaagaac ccctgcaggt 450
 cctggaacac cccctcagg agcaaattgc actgctggct cccgagcccc 500
 tccttgtcgg gctcccgtag acagttgtca ttactatgc tggcaatctt 550
 tcggagactt tccacggatt ttacaaaagc acctacagaa ccaaggaagg 600
 ggaactgagg atactagcat caacacaatt tgaaccact gcagctagaa 650
 tggcctttcc ctgctttgat gaacctgcct tcaaagcaag tttctcaatc 700
 aaaattagaa gagagccaag gcacctagcc atctccaata tgccattggt 750
 gaaatctgtg actgttgctg aaggactcat agaagaccat tttgatgtca 800
 ctgtgaagat gagcacctat ctgggtggcct tcatcatttc agattttgag 850
 tctgtcagca agataaccaa gagtggagtc aaggtttctg tttatgctgt 900
 gccagacaag ataaatcaag cagattatgc actggatgct gcggtgactc 950
 ttctagaatt ttatgaggat tatttcagca taccgtatcc cctacccaaa 1000
 caagatcttg ctgctattcc cgactttcag tctggtgcta tggaaaactg 1050
 gggactgaca acatatagag aatctgctct gttgtttgat gcagaaaagt 1100
 cttctgcac aagtaagctt ggcatcacag tgactgtggc ccatgaactg 1150
 gccaccagt ggtttgggaa cctggtcact atggaatggt ggaatgatct 1200
 ttggctaaat gaaggatttg ccaaatttat ggagtttgtg tctgtcagtg 1250
 tgacctatcc tgaactgaaa gttggagatt atttctttgg caaatgtttt 1300

gacgcaatgg aggtagatgc tttaaattcc tcacaccctg tgtctacacc 1350
 tgtggaaaat cctgctcaga tccgggagat gtttgatgat gtttcttatg 1400
 ataaggaggc ttgtattctg aatatgctaa gggagtatct tagcgctgac 1450
 gcatttaaaa gtggtattgt acagtatctc cagaagcata gctataaaaa 1500
 tacaaaaaac gaggacctgt gggatagtat ggcaagtatt tgccctacag 1550
 atgggtgtaa agggatggat ggcttttgct ctagaagtca acattcatct 1600
 tcctcctcac attggcatca ggaaggggtg gatgtgaaaa ccatgatgaa 1650
 cacttgga cactgagagg gttttccct aataaccatc acagtgaggg 1700
 ggaggaatgt acacatgaag caagagcact acatgaaggg ctctgacggc 1750
 gccccggaca ctgggtacct gtggcatgtt ccattgacat tcctcaccag 1800
 caaatccaac atggtccatc gatttttgct aaaaacaaaa acagatgtgc 1850
 tcctcctccc agaagagggt gaatggatca aatttaatgt gggcatgaat 1900
 ggctattaca ttgtgcatta cgaggatgat ggatgggact ctttgactgg 1950
 ctttttaaaa ggaacacaca cagcagtcag cagtaatgat cgggcaagtc 2000
 tcattaacaa tgcatctcag ctctgacgca ttgggaagct gtccattgaa 2050
 aaggccttgg atttatccct gtacttgaaa catgaaactg aaattatgcc 2100
 cgtgtttcaa ggtttgaatg agctgattcc tatgtataag ttaatggaga 2150
 aaagagatat gaatgaatg gaaactcaat tcaaggcctt cctcatcagg 2200
 ctgctaaggg acctcattga taagcagaca tggacagacg agggctcagt 2250
 ctgagagcaa atgctgcgga gtgaactact actcctcgcc tgtgtgcaca 2300
 actatcagcc gtgctgacag agggcagaag gctatttcag aaagtggag 2350
 gaatccaatg gaaacttgag cctgcctgtc gacgtgacct tggcagtgtt 2400
 tgctgtgggg gccagagca cagaaggctg ggattttctt tatagtaaat 2450
 atcagttttc tttgtccagt actgagaaaa gccaaattga atttgccctc 2500
 tgcagaaccc aaaataagga aaagcttcaa tggctactag atgaaagctt 2550
 taaggagatg aaaataaaaa ctgaggagt tccacaaatt cttacactca 2600
 ttggcaggaa cccagtagga taccactgg cctggcaatt tctgaggaaa 2650
 aactggaaca aacttgtaaa aaagtttgaa cttggctcat cttccatagc 2700
 ccacatggta atgggtacaa caaatcaatt ctccacaaga acacggcttg 2750
 aagaggtaaa aggattcttc agctctttga aagaaaatgg ttctcagctc 2800
 cgttgtgtcc aacagacaat tgaaaccatt gaagaaaaca tcggttgat 2850
 ggataagaat tttgataaaa tcagagtgtg gctgcaaagt gaaaagcttg 2900

aacgtatgta aaaattcctc ccttgcccg ttcctgttat ctctaatacac 2950
 caacattttg ttgagtgtat tttcaaacta gagatggctg ttttggctcc 3000
 aactggagat acttttttcc cttcaactca ttttttgact atccctgtga 3050
 aaagaatagc tgttagtttt tcatgaatgg gctttttcat gaatgggcta 3100
 tcgctaccat gtgttttgtt catcacaggt gttgccctgc aacgtaaacc 3150
 caagtgttgg gttccctgcc acagaagaat aaagtacctt attcttctca 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaa 3226

<210> 353
 <211> 941
 <212> PRT
 <213> Homo sapiens

<400> 353
 Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe
 1 5 10 15
 Leu Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser
 20 25 30
 Trp Cys Gln Ser Thr Glu Ala Ser Pro Lys Arg Ser Asp Gly Thr
 35 40 45
 Pro Phe Pro Trp Asn Lys Ile Arg Leu Pro Glu Tyr Val Ile Pro
 50 55 60
 Val His Tyr Asp Leu Leu Ile His Ala Asn Leu Thr Thr Leu Thr
 65 70 75
 Phe Trp Gly Thr Thr Lys Val Glu Ile Thr Ala Ser Gln Pro Thr
 80 85 90
 Ser Thr Ile Ile Leu His Ser His His Leu Gln Ile Ser Arg Ala
 95 100 105
 Thr Leu Arg Lys Gly Ala Gly Glu Arg Leu Ser Glu Glu Pro Leu
 110 115 120
 Gln Val Leu Glu His Pro Pro Gln Glu Gln Ile Ala Leu Leu Ala
 125 130 135
 Pro Glu Pro Leu Leu Val Gly Leu Pro Tyr Thr Val Val Ile His
 140 145 150
 Tyr Ala Gly Asn Leu Ser Glu Thr Phe His Gly Phe Tyr Lys Ser
 155 160 165
 Thr Tyr Arg Thr Lys Glu Gly Glu Leu Arg Ile Leu Ala Ser Thr
 170 175 180
 Gln Phe Glu Pro Thr Ala Ala Arg Met Ala Phe Pro Cys Phe Asp
 185 190 195
 Glu Pro Ala Phe Lys Ala Ser Phe Ser Ile Lys Ile Arg Arg Glu
 200 205 210
 Pro Arg His Leu Ala Ile Ser Asn Met Pro Leu Val Lys Ser Val

	530	535	540
Asn Val His Met	Lys Gln Glu His Tyr 545	Met Lys Gly Ser Asp 550	Gly 555
Ala Pro Asp Thr	Gly Tyr Leu Trp His 560	Val Pro Leu Thr Phe 565	Ile 570
Thr Ser Lys Ser	Asn Met Val His Arg 575	Phe Leu Leu Lys Thr 580	Lys 585
Thr Asp Val Leu	Ile Leu Pro Glu Glu 590	Val Glu Trp Ile Lys 595	Phe 600
Asn Val Gly Met	Asn Gly Tyr Tyr Ile 605	Val His Tyr Glu Asp 610	Asp 615
Gly Trp Asp Ser	Leu Thr Gly Leu Leu 620	Lys Gly Thr His Thr 625	Ala 630
Val Ser Ser Asn	Asp Arg Ala Ser Leu 635	Ile Asn Asn Ala Phe 640	Gln 645
Leu Val Ser Ile	Gly Lys Leu Ser Ile 650	Glu Lys Ala Leu Asp 655	Leu 660
Ser Leu Tyr Leu	Lys His Glu Thr Glu 665	Ile Met Pro Val Phe 670	Gln 675
Gly Leu Asn Glu	Leu Ile Pro Met Tyr 680	Lys Leu Met Glu Lys 685	Arg 690
Asp Met Asn Glu	Val Glu Thr Gln Phe 695	Lys Ala Phe Leu Ile 700	Arg 705
Leu Leu Arg Asp	Leu Ile Asp Lys Gln 710	Thr Trp Thr Asp Glu 715	Gly 720
Ser Val Ser Glu	Gln Met Leu Arg Ser 725	Glu Leu Leu Leu Leu 730	Ala 735
Cys Val His Asn	Tyr Gln Pro Cys Val 740	Gln Arg Ala Glu Gly 745	Tyr 750
Phe Arg Lys Trp	Lys Glu Ser Asn Gly 755	Asn Leu Ser Leu Pro 760	Val 765
Asp Val Thr Leu	Ala Val Phe Ala Val 770	Gly Ala Gln Ser Thr 775	Glu 780
Gly Trp Asp Phe	Leu Tyr Ser Lys Tyr 785	Gln Phe Ser Leu Ser 790	Ser 795
Thr Glu Lys Ser	Gln Ile Glu Phe Ala 800	Leu Cys Arg Thr Gln 805	Asn 810
Lys Glu Lys Leu	Gln Trp Leu Leu Asp 815	Glu Ser Phe Lys Gly 820	Asp 825
Lys Ile Lys Thr	Gln Glu Phe Pro Gln 830	Ile Leu Thr Leu Ile 835	Gly 840
Arg Asn Pro Val	Gly Tyr Pro Leu Ala 845	Trp Gln Phe Leu Arg 850	Lys

	845		850		855
Asn Trp Asn Lys	Leu Val Gln Lys Phe	Glu Leu Gly Ser Ser	Ser		
	860		865		870
Ile Ala His Met	Val Met Gly Thr Thr	Asn Gln Phe Ser Thr	Arg		
	875		880		885
Thr Arg Leu Glu	Glu Val Lys Gly Phe	Phe Ser Ser Leu Lys	Glu		
	890		895		900
Asn Gly Ser Gln	Leu Arg Cys Val Gln	Gln Thr Ile Glu Thr	Ile		
	905		910		915
Glu Glu Asn Ile	Gly Trp Met Asp Lys	Asn Phe Asp Lys Ile	Arg		
	920		925		930
Val Trp Leu Gln	Ser Glu Lys Leu Glu	Arg Met			
	935		940		

<210> 354

<211> 1587

<212> DNA

<213> Homo sapiens

<400> 354

```

cagccacaga cgggtcatga gcgcggtatt actgctggcc ctcctgggggt 50
tcctcctccc actgccagga gtgcaggcgc tgctctgccca gtttgggaca 100
gttcagcatg tgtggaaggt gtccgacctc ccccggaat ggaccctaa 150
gaacaccagc tgcgacagcg gcttgggggtg ccaggacacg ttgatgctca 200
ttgagagcgg accccaagtg agcctggtgc tctccaaggg ctgcacggag 250
gccaaggacc aggagccccg cgctactgag caccggatgg gcccggcct 300
ctccctgatc tctacacct tcgtgtgccg ccaggaggac ttctgcaaca 350
acctcgtaa ctccctcccg ctttggggcc cacagcccc agcagacca 400
ggatccttga ggtgccaggt ctgcttgtct atggaaggct gtctggaggg 450
gacaacagaa gagatctgcc ccaaggggac cacacactgt tatgatggcc 500
tcctcaggct caggggagga ggcattctct ccaatctgag agtcaggga 550
tgcctgcccc agccaggttg caacctgctc aatgggacac aggaaattgg 600
gcccgtgggt atgactgaga actgcaatag gaaagatttt ctgacctgtc 650
atcgggggac caccattatg acacacggaa acttgggtca agaaccact 700
gattggacca catcgaatac cgagatgtgc gaggtggggc aggtgtgtca 750
ggagacgctg ctgctcatag atgtaggact cacatcaacc ctgggtggga 800
caaaaggctg cagcactgtt ggggctcaaa attcccagaa gaccaccatc 850
cactcagccc ctcctgggggt gcttgtggcc tctataccc acttctgctc 900
ctcggacctg tgcaatagtg ccagcagcag cagcgttctg ctgaactccc 950

```

tccctcctca agctgcccct gtcccaggag accggcagtg tcctacctgt 1000
 gtgcagcccc ttggaacctg ttcaagtggc tccccccgaa tgacctgccc 1050
 caggggcgcc actcattgtt atgatgggta cattcatctc tcaggagggtg 1100
 ggctgtccac caaaatgagc attcaggggt gcggtggcca accttccagc 1150
 ttcttgttga accacaccag acaaatcggg atcttctctg cgcgtgagaa 1200
 gcgatgatgtg cagcctcctg cctctcagca tgagggaggt ggggctgagg 1250
 gcctggagtc tctcacttgg ggggtggggc tggcactggc cccagcgctg 1300
 tgggtggggag tggtttgccc ttctgtctaa ctctattacc cccacgattc 1350
 ttcaccgctg ctgaccaccc aactcaacc tccctctgac ctcataacct 1400
 aatggccttg gacaccagat tctttcccat tctgtccatg aatcatcttc 1450
 cccacacaca atcattcata tctactcacc taacagcaac actggggaga 1500
 gcctggagca tccggacttg ccctatggga gaggggacgc tggaggagtg 1550
 gctgcatgta tctgataata cagaccctgt cctttca 1587

<210> 355

<211> 437

<212> PRT

<213> Homo sapiens

<400> 355

Met	Ser	Ala	Val	Leu	Leu	Leu	Ala	Leu	Leu	Gly	Phe	Ile	Leu	Pro
1				5						10				15
Leu	Pro	Gly	Val	Gln	Ala	Leu	Leu	Cys	Gln	Phe	Gly	Thr	Val	Gln
				20					25					30
His	Val	Trp	Lys	Val	Ser	Asp	Leu	Pro	Arg	Gln	Trp	Thr	Pro	Lys
				35					40					45
Asn	Thr	Ser	Cys	Asp	Ser	Gly	Leu	Gly	Cys	Gln	Asp	Thr	Leu	Met
				50					55					60
Leu	Ile	Glu	Ser	Gly	Pro	Gln	Val	Ser	Leu	Val	Leu	Ser	Lys	Gly
				65					70					75
Cys	Thr	Glu	Ala	Lys	Asp	Gln	Glu	Pro	Arg	Val	Thr	Glu	His	Arg
				80					85					90
Met	Gly	Pro	Gly	Leu	Ser	Leu	Ile	Ser	Tyr	Thr	Phe	Val	Cys	Arg
				95					100					105
Gln	Glu	Asp	Phe	Cys	Asn	Asn	Leu	Val	Asn	Ser	Leu	Pro	Leu	Trp
				110					115					120
Ala	Pro	Gln	Pro	Pro	Ala	Asp	Pro	Gly	Ser	Leu	Arg	Cys	Pro	Val
				125					130					135
Cys	Leu	Ser	Met	Glu	Gly	Cys	Leu	Glu	Gly	Thr	Thr	Glu	Glu	Ile
				140					145					150
Cys	Pro	Lys	Gly	Thr	Thr	His	Cys	Tyr	Asp	Gly	Leu	Leu	Arg	Leu

	155	160	165
Arg Gly Gly Gly	Ile Phe Ser Asn Leu	Arg Val Gln Gly Cys	Met
	170	175	180
Pro Gln Pro Gly	Cys Asn Leu Leu Asn	Gly Thr Gln Glu Ile	Gly
	185	190	195
Pro Val Gly Met	Thr Glu Asn Cys Asn	Arg Lys Asp Phe Leu	Thr
	200	205	210
Cys His Arg Gly	Thr Thr Ile Met Thr	His Gly Asn Leu Ala	Gln
	215	220	225
Glu Pro Thr Asp	Trp Thr Thr Ser Asn	Thr Glu Met Cys Glu	Val
	230	235	240
Gly Gln Val Cys	Gln Glu Thr Leu Leu	Leu Ile Asp Val Gly	Leu
	245	250	255
Thr Ser Thr Leu	Val Gly Thr Lys Gly	Cys Ser Thr Val Gly	Ala
	260	265	270
Gln Asn Ser Gln	Lys Thr Thr Ile His	Ser Ala Pro Pro Gly	Val
	275	280	285
Leu Val Ala Ser	Tyr Thr His Phe Cys	Ser Ser Asp Leu Cys	Asn
	290	295	300
Ser Ala Ser Ser	Ser Ser Val Leu Leu	Asn Ser Leu Pro Pro	Gln
	305	310	315
Ala Ala Pro Val	Pro Gly Asp Arg Gln	Cys Pro Thr Cys Val	Gln
	320	325	330
Pro Leu Gly Thr	Cys Ser Ser Gly Ser	Pro Arg Met Thr Cys	Pro
	335	340	345
Arg Gly Ala Thr	His Cys Tyr Asp Gly	Tyr Ile His Leu Ser	Gly
	350	355	360
Gly Gly Leu Ser	Thr Lys Met Ser Ile	Gln Gly Cys Val Ala	Gln
	365	370	375
Pro Ser Ser Phe	Leu Leu Asn His Thr	Arg Gln Ile Gly Ile	Phe
	380	385	390
Ser Ala Arg Glu	Lys Arg Asp Val Gln	Pro Pro Ala Ser Gln	His
	395	400	405
Glu Gly Gly Gly	Ala Glu Gly Leu Glu	Ser Leu Thr Trp Gly	Val
	410	415	420
Gly Leu Ala Leu	Ala Pro Ala Leu Trp	Trp Gly Val Val Cys	Pro
	425	430	435

Ser Cys

<210> 356

<211> 1238

<212> DNA

<213> Homo sapiens

<400> 356

gcgacgggca ggacgccccg ttgccttagc gcggtgctcag gagttggtgt 50
cctgcctgcg ctcaggatga gggggaatct ggccttggtg ggcgttctaa 100
tcagcctggc cttcctgtca ctgctgccat ctggacatcc tcagccggct 150
ggcgatgacg cctgctctgt gcagatcctc gtccctggcc tcaaagggga 200
tgcgggagag aaggagagaca aaggcgcccc cggacggcct ggaagagtcg 250
gccccacggg agaaaaagga gacatggggg acaaaggaca gaaaggcagt 300
gtgggtcgtc atggaaaaat tgggccatt ggctctaaag gtgagaaagg 350
agattccggt gacataggac cccctggtcc taatggagaa ccaggcctcc 400
catgtgagtg cagccagctg cgcaaggcca tcggggagat ggacaaccag 450
gtctctcagc tgaccagcga gctcaagttc atcaagaatg ctgtcgccgg 500
tgtgcgagag acggagagca agatctacct gctggtgaag gaggagaagc 550
gctacgcgga cgccagctg tcctgccagg gccgcggggg cagctgagc 600
atgccaagg acgaggtgc caatggcctg atggccgcat acctggcgca 650
agccggcctg gcccggtgtct tcctggcat caacgacctg gagaaggagg 700
gcgccttctgt gtactctgac cactccccc tgcggacctt caacaagtgg 750
cgcagcggtg agcccaacaa tgctacgac gaggaggact gcgtggagat 800
ggtggcctcg gccggctgga acgacgtggc ctgccacacc accatgtact 850
tcatgtgtga gtttgacaag gagaacatgt gagcctcagg ctggggctgc 900
ccattggggg ccccatgt cctgcaggg ttggcagga cagagcccag 950
accatggtgc cagccagga gctgtccctc tgtgaagggt ggaggctcac 1000
tgagtagagg gctgttgtct aaactgagaa aatggcctat gcttaagagg 1050
aaaatgaaag tgttcctggg gtgctgtctc tgaagaagca gagtttcatt 1100
acctgtattg tagccccaat gtcattatgt aattattacc cagaattgct 1150
cttcataaaa gcttgtgcct ttgtccaagc tatacaataa aatctttaag 1200
tagtgagta gttaagtcca aaaaaaaaaa aaaaaaaaa 1238

<210> 357

<211> 271

<212> PRT

<213> Homo sapiens

<400> 357

Met	Arg	Gly	Asn	Leu	Ala	Leu	Val	Gly	Val	Leu	Ile	Ser	Leu	Ala
1				5				10					15	
Phe	Leu	Ser	Leu	Leu	Pro	Ser	Gly	His	Pro	Gln	Pro	Ala	Gly	Asp
				20				25					30	

Asp	Ala	Cys	Ser	Val	Gln	Ile	Leu	Val	Pro	Gly	Leu	Lys	Gly	Asp	35	40	45
Ala	Gly	Glu	Lys	Gly	Asp	Lys	Gly	Ala	Pro	Gly	Arg	Pro	Gly	Arg	50	55	60
Val	Gly	Pro	Thr	Gly	Glu	Lys	Gly	Asp	Met	Gly	Asp	Lys	Gly	Gln	65	70	75
Lys	Gly	Ser	Val	Gly	Arg	His	Gly	Lys	Ile	Gly	Pro	Ile	Gly	Ser	80	85	90
Lys	Gly	Glu	Lys	Gly	Asp	Ser	Gly	Asp	Ile	Gly	Pro	Pro	Gly	Pro	95	100	105
Asn	Gly	Glu	Pro	Gly	Leu	Pro	Cys	Glu	Cys	Ser	Gln	Leu	Arg	Lys	110	115	120
Ala	Ile	Gly	Glu	Met	Asp	Asn	Gln	Val	Ser	Gln	Leu	Thr	Ser	Glu	125	130	135
Leu	Lys	Phe	Ile	Lys	Asn	Ala	Val	Ala	Gly	Val	Arg	Glu	Thr	Glu	140	145	150
Ser	Lys	Ile	Tyr	Leu	Leu	Val	Lys	Glu	Glu	Lys	Arg	Tyr	Ala	Asp	155	160	165
Ala	Gln	Leu	Ser	Cys	Gln	Gly	Arg	Gly	Gly	Thr	Leu	Ser	Met	Pro	170	175	180
Lys	Asp	Glu	Ala	Ala	Asn	Gly	Leu	Met	Ala	Ala	Tyr	Leu	Ala	Gln	185	190	195
Ala	Gly	Leu	Ala	Arg	Val	Phe	Ile	Gly	Ile	Asn	Asp	Leu	Glu	Lys	200	205	210
Glu	Gly	Ala	Phe	Val	Tyr	Ser	Asp	His	Ser	Pro	Met	Arg	Thr	Phe	215	220	225
Asn	Lys	Trp	Arg	Ser	Gly	Glu	Pro	Asn	Asn	Ala	Tyr	Asp	Glu	Glu	230	235	240
Asp	Cys	Val	Glu	Met	Val	Ala	Ser	Gly	Gly	Trp	Asn	Asp	Val	Ala	245	250	255
Cys	His	Thr	Thr	Met	Tyr	Phe	Met	Cys	Glu	Phe	Asp	Lys	Glu	Asn	260	265	270

Met

<210> 358

<211> 972

<212> DNA

<213> Homo sapiens

<400> 358

agtgactgca gccttcctag atccccctcca ctcggtttct ctctttgcag 50

gagcaccggc agcaccagtg tgtgagggga gcaggcagcg gtcctagcca 100

gttccttgat cctgccagac caccagccc cggcacaga gctgctccac 150

aggcaccatg aggatcatgc tgctattcac agccatcctg gccttcagcc 200
 tagctcagag ctttggggct gtctgtaagg agccacagga ggaggtgggt 250
 cctggcgggg gccgcagcaa gagggatcca gatctctacc agctgctcca 300
 gagactcttc aaaagccact catctctgga gggattgctc aaagccctga 350
 gccaggctag cacagatcct aaggaatcaa catctcccga gaaacgtgac 400
 atgcatgact tctttgtggg acttatgggc aagaggagcg tccagccaga 450
 gggaaagaca ggacctttct taccttcagt gagggttcct cggccccctc 500
 atcccaatca gcttgatcc acaggaaagt cttccctggg aacagaggag 550
 cagagacctt tataagactc tctacggat gtgaatcaag agaacgtccc 600
 cagctttggc atcctcaagt atcccccgag agcagaatag gtactccact 650
 tccggactcc tggactgcat taggaagacc tctttccctg tcccaatccc 700
 caggtgcgca cgctcctgtt accctttctc ttcctgttc ttgtaacatt 750
 cttgtgcttt gactccttct ccatcttttc tacctgacct tgggtgtggaa 800
 actgcatagt gaatatcccc aaccccaatg ggcattgact gtagaatacc 850
 ctagagttcc tgtagtgctc tacattaaaa atataatgtc tctctctatt 900
 cctcaacaat aaaggatttt tgcatatgaa aaaaaaaaaa aaaaaaaaaa 950
 aaaaaaaaaa aaaaaaaaaa aa 972

<210> 359

<211> 135

<212> PRT

<213> Homo sapiens

<400> 359

Met	Arg	Ile	Met	Leu	Leu	Phe	Thr	Ala	Ile	Leu	Ala	Phe	Ser	Leu
1				5					10					15
Ala	Gln	Ser	Phe	Gly	Ala	Val	Cys	Lys	Glu	Pro	Gln	Glu	Glu	Val
				20					25					30
Val	Pro	Gly	Gly	Gly	Arg	Ser	Lys	Arg	Asp	Pro	Asp	Leu	Tyr	Gln
				35					40					45
Leu	Leu	Gln	Arg	Leu	Phe	Lys	Ser	His	Ser	Ser	Leu	Glu	Gly	Leu
				50					55					60
Leu	Lys	Ala	Leu	Ser	Gln	Ala	Ser	Thr	Asp	Pro	Lys	Glu	Ser	Thr
				65					70					75
Ser	Pro	Glu	Lys	Arg	Asp	Met	His	Asp	Phe	Phe	Val	Gly	Leu	Met
				80					85					90
Gly	Lys	Arg	Ser	Val	Gln	Pro	Glu	Gly	Lys	Thr	Gly	Pro	Phe	Leu
				95					100					105
Pro	Ser	Val	Arg	Val	Pro	Arg	Pro	Leu	His	Pro	Asn	Gln	Leu	Gly
				110					115					120

Ser Thr Gly Lys Ser Ser Leu Gly Thr Glu Glu Gln Arg Pro Leu
125 130 135

<210> 360

<211> 1738

<212> DNA

<213> Homo sapiens

<400> 360

```

gggcgtctcc ggctgctcct attgagctgt ctgctcgctg tgcccgtgt 50
gcctgctgtg cccgcgctgt cgccgctgct accgcgtctg ctggacgcgg 100
gagacgccag cgagctggtg attggagccc tgcggagagc tcaagcgccc 150
agctctgccc caggagccca ggctgccccg tgagtcccat agttgctgca 200
ggagtggagc catgagctgc gtccctgggtg gtgtcatccc cttggggctg 250
ctgttcctgg tctgcggatc ccaaggctac ctccctgcca acgtcactct 300
cttagaggag ctgctcagca aataccagca caacgagtct cactcccggg 350
tccgcagagc catccccagg gaggacaagg aggagatcct catgctgcac 400
aacaagcttc ggggccaggt gcagcctcag gcctccaaca tggagtacat 450
ggtgagcgcc ggctccggcc gcagaggctg gcaccggggg tggggcctgg 500
gccaccagcc tgctctgttc ccagccagc tctgttcccc agccagtgcg 550
tgtgatggct ggctcagggt ctccctctggc aggggaggat cccggctctg 600
ttctgttttg tttgtttgtt ttgagacagg gtctcactct gccactgacg 650
ctggagtgca atggcacaat cgtcatgccc tgaaacctta gactcccggg 700
gttaagcgat cctgcttcag cctcccaagt agctggaact acaggcatgc 750
accatggtgc ccagctagat tttaaattt ttgtggagat gggggtcttg 800
ctacgttgcc caggctggtc ttgaactcct aggetcaagc aatcctcctg 850
cctcagcctc tcaaagtgtc aggattatag gcatgagtca ccctgtctgg 900
ctctggctct gttcttaaca ttctgccaaa acaacacacg tgggttcct 950
gtgcagagcc tgccctggtg ccttcatgtc actcttggtg gctccactgg 1000
gaacacagct ctacgccttt ccacactgga ggcagagtgg ggagggggccc 1050
agggtctggc tttgctgatg ctgatctcag ctgtgccaca cgctagctgc 1100
accaccctga cttctcotta gccggtgtga goctcacttt ccacttgag 1150
agtccttcct cgcgtggttg ccatgactgt gagataagtc gaggctgtga 1200
aggggccggc acagactgac ctgcctcccc aaccctagg ctttgctaac 1250
cgggaaagga gctaacggtg acagaagaca gccaaaggtc accctccgg 1300
gtgattgtga tgggtgttcc aggtgtggtt gggcgatgct gctacttgac 1350

```

cccaagctcc agtgtggaaa ctctcttctt ggctggtttt ccagaactac 1400
 agaggaatgg accacagtct tccagggccc ctctctgtcc accaaccggg 1450
 agcctccacc ttggccatcc gtcagctatg aatggctttt taaacaaacc 1500
 cacgtcccag cctgggtaac atggtaaagc cccgtctcta caaaaaaatc 1550
 caagttagcc gggcatgggt gtgogcacct gtagtcccag ctgcagtggg 1600
 actgaggtgg aggtggaggt ggggggtggg agctgaggaa ggaggatcgc 1650
 ttgagcctgg gaagtcgagg ctgcagtgag ctgagattgc accactgcac 1700
 tccagcctgg gtgacagagc aagaccctgt ctcaaaaa 1738

<210> 361
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 361
 Met Ser Cys Val Leu Gly Gly Val Ile Pro Leu Gly Leu Leu Phe
 1 5 10 15
 Leu Val Cys Gly Ser Gln Gly Tyr Leu Leu Pro Asn Val Thr Leu
 20 25 30
 Leu Glu Glu Leu Leu Ser Lys Tyr Gln His Asn Glu Ser His Ser
 35 40 45
 Arg Val Arg Arg Ala Ile Pro Arg Glu Asp Lys Glu Glu Ile Leu
 50 55 60
 Met Leu His Asn Lys Leu Arg Gly Gln Val Gln Pro Gln Ala Ser
 65 70 75
 Asn Met Glu Tyr Met Val Ser Ala Gly Ser Gly Arg Arg Gly Trp
 80 85 90
 His Arg Gly Trp Gly Leu Gly His Gln Pro Ala Leu Phe Pro Ser
 95 100 105
 Gln Leu Cys Ser Pro Ala Ser Ala Cys Asp Gly Trp Leu Arg Val
 110 115 120
 Ser Ser Gly Arg Gly Gly Ser Arg Leu Cys Ser Val Leu Phe Val
 125 130 135
 Cys Phe Glu Thr Gly Ser His Ser Ala Thr Asp Ala Gly Val Gln
 140 145 150
 Trp His Asn Arg His Ala Leu Lys Pro
 155

<210> 362
 <211> 422
 <212> DNA
 <213> Homo sapiens

<400> 362
 aaggagaggc caccgggact tcagtgtctc ctccatccca ggagcgagc 50

ggccactatg ggggtctgggc tgcccccttgt cctcctcttg accctccttg 100
gcagctcaca tggaacaggg ccgggtatga ctttgcaact gaagctgaag 150
gagtcttttc tgacaaattc ctctatgag tccagcttcc tggaattgct 200
tgaaaagctc tgccctctcc tccatctccc ttcagggacc agcgtcaccc 250
tccaccatgc aagatctcaa caccatgttg tctgcaacac atgacagcca 300
ttgaagcctg tgtccttctt ggcccgggct tttgggcccgg ggatgcagga 350
ggcaggcccc gaccctgtct ttcagcaggc cccaccctc ctgagtggca 400
ataaataaaa ttcggtatgc tg 422

<210> 363
<211> 78
<212> PRT
<213> Homo sapiens

<400> 363
Met Gly Ser Gly Leu Pro Leu Val Leu Leu Leu Thr Leu Leu Gly
1 5 10 15
Ser Ser His Gly Thr Gly Pro Gly Met Thr Leu Gln Leu Lys Leu
20 25 30
Lys Glu Ser Phe Leu Thr Asn Ser Ser Tyr Glu Ser Ser Phe Leu
35 40 45
Glu Leu Leu Glu Lys Leu Cys Leu Leu Leu His Leu Pro Ser Gly
50 55 60
Thr Ser Val Thr Leu His His Ala Arg Ser Gln His His Val Val
65 70 75

Cys Asn Thr

<210> 364
<211> 826
<212> DNA
<213> Homo sapiens

<400> 364
aattgtatct gtgtaatgtt aaaacaaacg aaataaaata gaaggaaaaa 50
ctttctgagt ttcaaaaaca acagactagt actctaaaga actctttaaa 100
acaattaact gttaggattg cagttatgat tggatattat ttaattctgt 150
ttctgatgtg gggttcctcc actgtgttct gtgtgctatt aatatttacc 200
attgcagaag cttcattcag tgttgaaaat gaatgcttag tggatctgtg 250
cctcttacgc atatgttaca aattatctgg agttcctaata caatgcagag 300
ttcccctccc ctccgattgt tctaaataat tgaaagatgt ctgctgtgga 350
aaaaggcatg tatttaaatac tgtatgattc tcaaccatct ttagttggga 400
aaggtccttg aaagccaatg gaaatacttt ttttttttct tggcactaat 450

caagtgagtg ttaccttttc acttagtagg atgtgttggt acgctagtaa 500
aatagaaacc tgtgtttatt ctcagggtatt ttagaaacaa cagccatcat 550
tttattttat gtgtgtgttc ttggctgtat tcataaatta tatattttgg 600
gctatcaaatt attacttcat tcaatataaa taacaatagt agaagttggt 650
tacttagata tgctttctag ttgcattttc tcagcctatg taagactact 700
ttgttgtaat agcctttgaa atttacagta ctgtctctct actatcttca 750
gattacttga ttcaaataaa ccaattatgt ttgtaattga tattaataaa 800
accagaataa aagttcatat ctaccc 826

<210> 365

<211> 67

<212> PRT

<213> Homo sapiens

<400> 365

Met Ile Gly Tyr Tyr Leu Ile Leu Phe Leu Met Trp Gly Ser Ser
1 5 10 15

Thr Val Phe Cys Val Leu Leu Ile Phe Thr Ile Ala Glu Ala Ser
20 25 30

Phe Ser Val Glu Asn Glu Cys Leu Val Asp Leu Cys Leu Leu Arg
35 40 45

Ile Cys Tyr Lys Leu Ser Gly Val Pro Asn Gln Cys Arg Val Pro
50 55 60

Leu Pro Ser Asp Cys Ser Lys
65

<210> 366

<211> 2475

<212> DNA

<213> Homo sapiens

<400> 366

gaggatttgc cacagcagcg gatagagcag gagagcacca ccgagccct 50

tgagacatcc ttgagaagag ccacagcata agagactgcc ctgcttggtg 100

ttttgcagga tgatggtggc ccttcgagga gcttctgcat tgctggttct 150

gttccttgca gcttttctgc ccccgccgca gtgtaccag gaccagcca 200

tggtgcatta catctaccag cgctttcgag tcttgagca agggctggaa 250

aaatgtaccc aagcaacgag ggcatacatt caagaattcc aagagttctc 300

aaaaatata tctgtcatgc tgggaagatg tcagacctac acaagtgagt 350

acaagagtgc agtgggtaac ttggcactga gagttgaacg tgcccaacg 400

gagattgact acatacaata ccttcgagag gctgacgagt gcatcgtatc 450

agaggacaag aactggcag aaatgttgct ccaagaagct gaagaagaga 500

aaaagatccg gactctgctg aatgcaagct gtgacaacat gctgatgggc 550
 ataaagtctt tgaaaatagt gaagaagatg atggacacac atggctcttg 600
 gatgaaagat gctgtctata actctccaaa ggtgtactta ttaattggat 650
 ccagaaacaa cactgttttg gaatttgcaa acatacgggc attcatggag 700
 gataacacca agccagctcc ccggaagcaa atcctaacac tttcctggca 750
 gggaacaggc caagtgatct acaaaggttt tctatTTTTT cataaccaag 800
 caacttctaa tgagataatc aaatataacc tgcagaagag gactgtggaa 850
 gatcgaatgc tgctcccagg aggggtaggc cgagcattgg tttaccagca 900
 ctccccctca acttacattg acctggctgt ggatgagcat gggctctggg 950
 ccatccactc tgggccaggc acccatagcc atttggttct caciaagatt 1000
 gagccgggca cactgggagt ggagcattca tgggataccc catgcagaag 1050
 ccaggatgct gaagcctcat tctcttTgtg tggggTtctc tatgtgttct 1100
 acagtactgg gggccagggc cctcatogca tcacctgcat ctatgatcca 1150
 ctgggcacta tcagtgagga ggacttgccc aacttgTtct tccccagag 1200
 accaagaagt cactccatga tccattacaa cccagagat aagcagctct 1250
 atgcctggaa tgaaggaaac cagatcattt acaaactcca gacaaagaga 1300
 aagctgcctc tgaagtaatg cattacagct gtgagaaaga gcaactgtggc 1350
 tttggcagct gttctacagg acagtgaggc tatagcccct tcacaatata 1400
 gtatccctct aatcacacac aggaagagtg tgtagaagtg gaaatacgta 1450
 tgctccttt cccaaatgtc actgccttag gtatcttcca agagcttaga 1500
 tgagagcata tcatcaggaa agtttcaaca atgtccatta ctccccaaa 1550
 cctcctggct ctcaaggatg accacattct gatacagcct acttcaagcc 1600
 ttttgTttta ctgtcccca gcatttactg taactctgcc atcttccctc 1650
 ccacaattag agttgtatgc cagccoctaa tattcaccac tggcttttct 1700
 ctcccctggc ctttgctgaa gctcttccct ctttttcaaa tgtctattga 1750
 tattctccca ttttcaactgc ccaactaaaa tactattaat atttctttct 1800
 tttcttttct tttttttgag acaaggTctc actatgttgc ccaggctggg 1850
 ctcaaactcc agagctcaag agatcctcct gctcagcct cctaagtacc 1900
 tgggattaca ggcatgtgcc accacacctg gcttaaaata ctatttctta 1950
 ttgaggTtta acctctattt cccctagccc tgtccttcca ctaagcttgg 2000
 tagatgtaat aataaagtga aaatattaac atttgaatat cgctttccag 2050
 gtgtggagtg tttgcacatc attgaattct cgtttccact ttgtgaaaca 2100

tgcacaagtc tttacagctg tcattctaga gtttaggtga gtaacacaat 2150
 tacaaagtga aagatacagc tagaaaatac tacaaatccc atagtttttc 2200
 cattgcccac ggaagcatca aatacgtatg tttgttcacc tactcttata 2250
 gtcaatgcgt tcacgttttc agcctaaaaa taatagtctg tcccttttagc 2300
 cagttttcat gtctgcacaa gacctttcaa taggcctttc aaatgataat 2350
 tcctccagaa aaccagtcta aggggtgagga ccccaactct agcctcctct 2400
 tgtcttgctg tcctctgttt ctctctttct gcttttaaatt caataaaaagt 2450
 gacactgagc aaaaaaaaaa aaaaa 2475

<210> 367
 <211> 402
 <212> PRT
 <213> Homo sapiens

<400> 367
 Met Met Val Ala Leu Arg Gly Ala Ser Ala Leu Leu Val Leu Phe
 1 5 10 15
 Leu Ala Ala Phe Leu Pro Pro Pro Gln Cys Thr Gln Asp Pro Ala
 20 25 30
 Met Val His Tyr Ile Tyr Gln Arg Phe Arg Val Leu Glu Gln Gly
 35 40 45
 Leu Glu Lys Cys Thr Gln Ala Thr Arg Ala Tyr Ile Gln Glu Phe
 50 55 60
 Gln Glu Phe Ser Lys Asn Ile Ser Val Met Leu Gly Arg Cys Gln
 65 70 75
 Thr Tyr Thr Ser Glu Tyr Lys Ser Ala Val Gly Asn Leu Ala Leu
 80 85 90
 Arg Val Glu Arg Ala Gln Arg Glu Ile Asp Tyr Ile Gln Tyr Leu
 95 100 105
 Arg Glu Ala Asp Glu Cys Ile Val Ser Glu Asp Lys Thr Leu Ala
 110 115 120
 Glu Met Leu Leu Gln Glu Ala Glu Glu Glu Lys Lys Ile Arg Thr
 125 130 135
 Leu Leu Asn Ala Ser Cys Asp Asn Met Leu Met Gly Ile Lys Ser
 140 145 150
 Leu Lys Ile Val Lys Lys Met Met Asp Thr His Gly Ser Trp Met
 155 160 165
 Lys Asp Ala Val Tyr Asn Ser Pro Lys Val Tyr Leu Leu Ile Gly
 170 175 180
 Ser Arg Asn Asn Thr Val Trp Glu Phe Ala Asn Ile Arg Ala Phe
 185 190 195
 Met Glu Asp Asn Thr Lys Pro Ala Pro Arg Lys Gln Ile Leu Thr
 200 205 210

Leu	Ser	Trp	Gln	Gly	Thr	Gly	Gln	Val	Ile	Tyr	Lys	Gly	Phe	Leu	215	220	225
Phe	Phe	His	Asn	Gln	Ala	Thr	Ser	Asn	Glu	Ile	Ile	Lys	Tyr	Asn	230	235	240
Leu	Gln	Lys	Arg	Thr	Val	Glu	Asp	Arg	Met	Leu	Leu	Pro	Gly	Gly	245	250	255
Val	Gly	Arg	Ala	Leu	Val	Tyr	Gln	His	Ser	Pro	Ser	Thr	Tyr	Ile	260	265	270
Asp	Leu	Ala	Val	Asp	Glu	His	Gly	Leu	Trp	Ala	Ile	His	Ser	Gly	275	280	285
Pro	Gly	Thr	His	Ser	His	Leu	Val	Leu	Thr	Lys	Ile	Glu	Pro	Gly	290	295	300
Thr	Leu	Gly	Val	Glu	His	Ser	Trp	Asp	Thr	Pro	Cys	Arg	Ser	Gln	305	310	315
Asp	Ala	Glu	Ala	Ser	Phe	Leu	Leu	Cys	Gly	Val	Leu	Tyr	Val	Val	320	325	330
Tyr	Ser	Thr	Gly	Gly	Gln	Gly	Pro	His	Arg	Ile	Thr	Cys	Ile	Tyr	335	340	345
Asp	Pro	Leu	Gly	Thr	Ile	Ser	Glu	Glu	Asp	Leu	Pro	Asn	Leu	Phe	350	355	360
Phe	Pro	Lys	Arg	Pro	Arg	Ser	His	Ser	Met	Ile	His	Tyr	Asn	Pro	365	370	375
Arg	Asp	Lys	Gln	Leu	Tyr	Ala	Trp	Asn	Glu	Gly	Asn	Gln	Ile	Ile	380	385	390
Tyr	Lys	Leu	Gln	Thr	Lys	Arg	Lys	Leu	Pro	Leu	Lys				395	400	

<210> 368
 <211> 2281
 <212> DNA
 <213> Homo sapiens

<400> 368
 gggcgcccgcc gtactcacta gctgaggtgg cagtgggtcc accaacaatgg 50
 agctctcgca gatgtcggag ctcatggggc tgtcgggtgtt gcttgggetg 100
 ctggccctga tggcgacggc ggcggtagcg cgggggtggc tgcgcgcggg 150
 ggaggagagg agcggccggc ccgcctgccaaaagcaaat ggatttccac 200
 ctgacaaaatc ttcgggatcc aagaagcaga aacaatatca gcggattcgg 250
 aaggagaagc ctcaacaaca caacttcacc caccgcctcc tggctgcagc 300
 tctgaagagc cacagcggga acatatcttg catggacttt agcagcaatg 350
 gcaaatacct ggctacctgt gcagatgac gcaccatccg catctggagc 400
 accaaggact tctgcagcg agagcaccgc agcatgagag ccaacgtgga 450

gctggaccac gccaccctgg tgcgcttcag cctgactgc agagccttca 500
tcgtctgggt ggccaacggg gacaccctcc gtgtcttcaa gatgaccaag 550
cgggaggatg ggggctacac cttcacagcc accccagagg acttccctaa 600
aaagcacaag gcgcctgtca tcgacattgg cattgctaac acagggaagt 650
ttatcatgac tgcctccagt gacaccactg tcctcatctg gagcctgaag 700
ggtcaagtgc tgtctaccat caacaccaac cagatgaaca acacacacgc 750
tgctgtatct ccctgtggca gatttgtagc ctctgtgtggc ttcaccccag 800
atgtgaaggt ttgggaagtc tgcttttgaa agaaggggga gttccaggag 850
gtggtgagag ccttcgaact aaagggccac tccgcggctg tgcactcgtt 900
tgctttctcc aacgactcac ggaggatggc ttctgtctcc aaggatggta 950
catggaaact gtgggacaca gatgtggaat acaagaagaa gcaggacccc 1000
tacttgctga agacaggccg ctttgaagag gcggcggttg ccgcgccgtg 1050
ccgcctggcc ctctcccca acgcccaggc cttggccttg gccagtggca 1100
gtagtattca tctctacaat acccgcgagg gcgagaagga ggagtgcctt 1150
gagcgggtcc atggcgagt tatcgccaac ttgtcctttg acatcactgg 1200
ccgctttctg gcctcctgtg gggaccgggc ggtgcggctg tttcacaaca 1250
ctcctggcca ccgagccatg gtggaggaga tgcagggcca cctgaagcgg 1300
gcctccaacg agagcaccg ccagaggctg cagcagcagc tgaccaggc 1350
ccaagagacc ctgaagagcc tgggtgccct gaagaagtga ctctgggagg 1400
gcccggcgca gaggattgag gaggagggat ctggcctcct catggcactg 1450
ctgccatctt tcctcccagg tggaagcctt tcagaaggag tctcctggtt 1500
ttcttactgg tggccctgct tcttccatt gaaactactc ttgtctactt 1550
aggtctctct cttcttctg gctgtgactc ctccctgact agtggccaag 1600
gtgcttttct tcctcccagg ccagtggtt ggaatctgtc ccacacctgg 1650
actgaggaga atggtagaga ggagaggaga gagagagaga atgtgatttt 1700
tggccttctg gcagcacatc ctcacacca aagaagtttg taaatgttcc 1750
agaacaacct agagaacacc tgagtactaa gcagcagttt tgcaaggatg 1800
ggagactggg atagcttccc atcacagaac tgtgttccat caaaaagaca 1850
ctaagggatt tccttctggg cctcagttct atttgtaaga tggagaataa 1900
tcctctctgt gaactccttg caaagatgat atgaggctaa gagaatatca 1950
agtccccagg tctggaagaa aagtagaaaa gagtagtact attgtccaat 2000
gtcatgaaag tggtaaaaagt gggaaccagt gtgctttgaa accaaattag 2050

aaacacattc cttgggaagg caaagttttc tgggacttga tcatacattt 2100
tatatggttg ggactttctc cttcgggaga tgatatcttg ttttaaggaga 2150
cctctttttca gttcatcaag ttcacagat atttgagtgc ccactctgtg 2200
cccaaataaa tatgagctgg ggattaaaaa aaaaaaaaaa aaaaaaaaaa 2250
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2281

<210> 369

<211> 447

<212> PRT

<213> Homo sapiens

<400> 369

Met	Glu	Leu	Ser	Gln	Met	Ser	Glu	Leu	Met	Gly	Leu	Ser	Val	Leu	1	5	10	15
Leu	Gly	Leu	Leu	Ala	Leu	Met	Ala	Thr	Ala	Ala	Val	Ala	Arg	Gly	20	25	30	
Trp	Leu	Arg	Ala	Gly	Glu	Glu	Arg	Ser	Gly	Arg	Pro	Ala	Cys	Gln	35	40	45	
Lys	Ala	Asn	Gly	Phe	Pro	Pro	Asp	Lys	Ser	Ser	Gly	Ser	Lys	Lys	50	55	60	
Gln	Lys	Gln	Tyr	Gln	Arg	Ile	Arg	Lys	Glu	Lys	Pro	Gln	Gln	His	65	70	75	
Asn	Phe	Thr	His	Arg	Leu	Leu	Ala	Ala	Ala	Leu	Lys	Ser	His	Ser	80	85	90	
Gly	Asn	Ile	Ser	Cys	Met	Asp	Phe	Ser	Ser	Asn	Gly	Lys	Tyr	Leu	95	100	105	
Ala	Thr	Cys	Ala	Asp	Asp	Arg	Thr	Ile	Arg	Ile	Trp	Ser	Thr	Lys	110	115	120	
Asp	Phe	Leu	Gln	Arg	Glu	His	Arg	Ser	Met	Arg	Ala	Asn	Val	Glu	125	130	135	
Leu	Asp	His	Ala	Thr	Leu	Val	Arg	Phe	Ser	Pro	Asp	Cys	Arg	Ala	140	145	150	
Phe	Ile	Val	Trp	Leu	Ala	Asn	Gly	Asp	Thr	Leu	Arg	Val	Phe	Lys	155	160	165	
Met	Thr	Lys	Arg	Glu	Asp	Gly	Gly	Tyr	Thr	Phe	Thr	Ala	Thr	Pro	170	175	180	
Glu	Asp	Phe	Pro	Lys	Lys	His	Lys	Ala	Pro	Val	Ile	Asp	Ile	Gly	185	190	195	
Ile	Ala	Asn	Thr	Gly	Lys	Phe	Ile	Met	Thr	Ala	Ser	Ser	Asp	Thr	200	205	210	
Thr	Val	Leu	Ile	Trp	Ser	Leu	Lys	Gly	Gln	Val	Leu	Ser	Thr	Ile	215	220	225	
Asn	Thr	Asn	Gln	Met	Asn	Asn	Thr	His	Ala	Ala	Val	Ser	Pro	Cys	230	235	240	

Gly	Arg	Phe	Val	Ala	Ser	Cys	Gly	Phe	Thr	Pro	Asp	Val	Lys	Val	245	250	255
Trp	Glu	Val	Cys	Phe	Gly	Lys	Lys	Gly	Glu	Phe	Gln	Glu	Val	Val	260	265	270
Arg	Ala	Phe	Glu	Leu	Lys	Gly	His	Ser	Ala	Ala	Val	His	Ser	Phe	275	280	285
Ala	Phe	Ser	Asn	Asp	Ser	Arg	Arg	Met	Ala	Ser	Val	Ser	Lys	Asp	290	295	300
Gly	Thr	Trp	Lys	Leu	Trp	Asp	Thr	Asp	Val	Glu	Tyr	Lys	Lys	Lys	305	310	315
Gln	Asp	Pro	Tyr	Leu	Leu	Lys	Thr	Gly	Arg	Phe	Glu	Glu	Ala	Ala	320	325	330
Gly	Ala	Ala	Pro	Cys	Arg	Leu	Ala	Leu	Ser	Pro	Asn	Ala	Gln	Val	335	340	345
Leu	Ala	Leu	Ala	Ser	Gly	Ser	Ser	Ile	His	Leu	Tyr	Asn	Thr	Arg	350	355	360
Arg	Gly	Glu	Lys	Glu	Glu	Cys	Phe	Glu	Arg	Val	His	Gly	Glu	Cys	365	370	375
Ile	Ala	Asn	Leu	Ser	Phe	Asp	Ile	Thr	Gly	Arg	Phe	Leu	Ala	Ser	380	385	390
Cys	Gly	Asp	Arg	Ala	Val	Arg	Leu	Phe	His	Asn	Thr	Pro	Gly	His	395	400	405
Arg	Ala	Met	Val	Glu	Glu	Met	Gln	Gly	His	Leu	Lys	Arg	Ala	Ser	410	415	420
Asn	Glu	Ser	Thr	Arg	Gln	Arg	Leu	Gln	Gln	Gln	Leu	Thr	Gln	Ala	425	430	435
Gln	Glu	Thr	Leu	Lys	Ser	Leu	Gly	Ala	Leu	Lys	Lys				440	445	

<210> 370
 <211> 1415
 <212> DNA
 <213> Homo sapiens

<400> 370
 tggcctcccc agcttgccag gcacaaggct gagcgggagg aagcgagagg 50
 catctaagca ggcagtgttt tgccttcacc ccaagtgacc atgagaggtg 100
 ccacgcgagt ctcaatcatg ctctcctag taactgtgtc tgactgtgct 150
 gtgatcacag gggcctgtga gcgggatgtc cagtgtgggg caggcacctg 200
 ctgtgccatc agcctgtggc ttcgagggct gcggatgtgc accccgctgg 250
 ggcgggaagg cgaggagtgc caccocggca gccacaaggc ccccttcttc 300
 aggaaacgca agcaccacac ctgtccttgc ttgcccaacc tgctgtgctc 350
 caggttcccg gacggcaggt accgctgctc catggacttg aagaacatca 400

atttttaggc gcttgccctgg tctcaggata cccaccatcc ttttcctgag 450
 cacagcctgg atttttatatt ctgccatgaa acccagctcc catgactctc 500
 ccagtcacct cactgactac cctgatctct cttgtctagt acgcacatat 550
 gcacacaggc agacatacct cccatcatga catggtcccc aggctggcct 600
 gaggatgtca cagcttgagg ctgtggtgtg aaagggtggc agcctgggtc 650
 tcttccctgc tcaggctgcc agagaggtgg taaatggcag aaaggacatt 700
 cccctcccc tccccagggtg acctgctctc tttcctgggc cctgcccctc 750
 tccccacatg tatccctcgg tctgaattag acattcctgg gcacaggctc 800
 ttgggtgcat tgctcagagt cccaggctct ggctgaccc tcaggccctt 850
 cacgtgaggt ctgtgaggac caatttgtgg gtagttcatc ttccctcgat 900
 tggttaactc cttagtttca gaccacagac tcaagattgg ctcttcccag 950
 agggcagcag acagtcaccc caaggcaggt gtagggagcc caggagggcc 1000
 aatcagcccc ctgaagactc tgggtcccagt cagcctgtgg cttgtggcct 1050
 gtgacctgtg accttctgcc agaattgtca tgctctgag gccccctctt 1100
 accacacttt accagttaac cactgaagcc cccaattccc acagcttttc 1150
 cattaaaatg caaatggtgg tggttcaatc taatctgata ttgacatatt 1200
 agaaggcaat tagggtgttt ccttaaacia ctctttcca aggatcagcc 1250
 ctgagagcag gttggtgact ttgaggaggg cagtcctctg tccagattgg 1300
 ggtgggagca agggacaggg agcagggcag gggctgaaag gggcactgat 1350
 tcagaccagg gaggcaacta cacaccaaca tgctggcttt agaataaaaag 1400
 caccaactga aaaaa 1415

<210> 371

<211> 105

<212> PRT

<213> Homo sapiens

<400> 371

Met	Arg	Gly	Ala	Thr	Arg	Val	Ser	Ile	Met	Leu	Leu	Leu	Val	Thr
1				5					10					15
Val	Ser	Asp	Cys	Ala	Val	Ile	Thr	Gly	Ala	Cys	Glu	Arg	Asp	Val
				20					25					30
Gln	Cys	Gly	Ala	Gly	Thr	Cys	Cys	Ala	Ile	Ser	Leu	Trp	Leu	Arg
				35					40					45
Gly	Leu	Arg	Met	Cys	Thr	Pro	Leu	Gly	Arg	Glu	Gly	Glu	Glu	Cys
				50					55					60
His	Pro	Gly	Ser	His	Lys	Val	Pro	Phe	Phe	Arg	Lys	Arg	Lys	His
				65					70					75

His	Thr	Cys	Pro	Cys	Leu	Pro	Asn	Leu	Leu	Cys	Ser	Arg	Phe	Pro
				80					85					90
Asp	Gly	Arg	Tyr	Arg	Cys	Ser	Met	Asp	Leu	Lys	Asn	Ile	Asn	Phe
				95					100					105

<210> 372
 <211> 1281
 <212> DNA
 <213> Homo sapiens

<400> 372
 agcgcccggg cgctggggcg gtaaaaggcc ggcagaaggg aggcacttga 50
 gaaatgtctt tcctccagga cccaagtttc ttcacatgg ggatgtggtc 100
 cattggtgca ggagccctgg gggctgctgc cttggcattg ctgcttgcca 150
 acacagacgt gtttctgtcc aagccccaga aagcggccct ggagtacctg 200
 gaggatatag acctgaaaac actggagaag gaaccaagga ctttcaaagc 250
 aaaggagcta tgggaaaaaa atggagctgt gattatggcc gtgcggaggc 300
 caggctgttt cctctgtcga gaggaagctg cggatctgtc ctccctgaaa 350
 agcatgttgg accagctggg cgtccccctc tatgcagtgg taaaggagca 400
 catcaggact gaagtgaagg atttcagcc ttatttcaaa ggagaaatct 450
 tcctggatga aaagaaaaag ttctatggtc caciaaggcg gaagatgatg 500
 tttatgggat ttatcgtct gggagtgtgg tacaacttct tccgagcctg 550
 gaacggaggc ttctctggaa acctggaagg agaaggcttc atccttgggg 600
 gagttttcgt ggtgggatca ggaaagcagg gcattcttct tgagcaccga 650
 gaaaaagaat ttggagacaa agtaaaccta ctttctgttc tggaaagctgc 700
 taagatgatc aaaccacaga ctttggcctc agagaaaaaa tgattgtgtg 750
 aaactgccc a gctcagggat aaccagggac attcacctgt gttcatggga 800
 tgtattgttt ccactcgtgt ccctaaggag tgagaaaccc atttatactc 850
 tactctcagt atggattatt aatgtatttt aatattctgt ttagggccac 900
 taaggcaaaa tagccccaaa acaagactga caaaaatctg aaaaactaat 950
 gaggattatt aagctaaaac ctgggaaata ggaggcttaa aattgactgc 1000
 caggctgggt gcagtggctc acacctgtaa tcccagcact ttggggaggcc 1050
 aaggtgagca agtcacttga ggtcgggagt tcgagaccag cctgagcaac 1100
 atggcgaaac cccgtctcta ctaaaaatac aaaaatcacc cgggtgtggg 1150
 ggcaggcacc tgtagtccca gctaccggg aggctgaggc aggagaatca 1200
 cttgaacctg ggagggtggag gttgcgggtga gctgagatca caccactgta 1250
 ttccagcctg ggtgactgag actctaacta a 1281

<210> 373
 <211> 229
 <212> PRT
 <213> Homo sapiens

<400> 373

Met	Ser	Phe	Leu	Gln	Asp	Pro	Ser	Phe	Phe	Thr	Met	Gly	Met	Trp
1				5					10					15
Ser	Ile	Gly	Ala	Gly	Ala	Leu	Gly	Ala	Ala	Ala	Leu	Ala	Leu	Leu
				20					25					30
Leu	Ala	Asn	Thr	Asp	Val	Phe	Leu	Ser	Lys	Pro	Gln	Lys	Ala	Ala
				35					40					45
Leu	Glu	Tyr	Leu	Glu	Asp	Ile	Asp	Leu	Lys	Thr	Leu	Glu	Lys	Glu
				50					55					60
Pro	Arg	Thr	Phe	Lys	Ala	Lys	Glu	Leu	Trp	Glu	Lys	Asn	Gly	Ala
				65					70					75
Val	Ile	Met	Ala	Val	Arg	Arg	Pro	Gly	Cys	Phe	Leu	Cys	Arg	Glu
				80					85					90
Glu	Ala	Ala	Asp	Leu	Ser	Ser	Leu	Lys	Ser	Met	Leu	Asp	Gln	Leu
				95					100					105
Gly	Val	Pro	Leu	Tyr	Ala	Val	Val	Lys	Glu	His	Ile	Arg	Thr	Glu
				110					115					120
Val	Lys	Asp	Phe	Gln	Pro	Tyr	Phe	Lys	Gly	Glu	Ile	Phe	Leu	Asp
				125					130					135
Glu	Lys	Lys	Lys	Phe	Tyr	Gly	Pro	Gln	Arg	Arg	Lys	Met	Met	Phe
				140					145					150
Met	Gly	Phe	Ile	Arg	Leu	Gly	Val	Trp	Tyr	Asn	Phe	Phe	Arg	Ala
				155					160					165
Trp	Asn	Gly	Gly	Phe	Ser	Gly	Asn	Leu	Glu	Gly	Glu	Gly	Phe	Ile
				170					175					180
Leu	Gly	Gly	Val	Phe	Val	Val	Gly	Ser	Gly	Lys	Gln	Gly	Ile	Leu
				185					190					195
Leu	Glu	His	Arg	Glu	Lys	Glu	Phe	Gly	Asp	Lys	Val	Asn	Leu	Leu
				200					205					210
Ser	Val	Leu	Glu	Ala	Ala	Lys	Met	Ile	Lys	Pro	Gln	Thr	Leu	Ala
				215					220					225

Ser Glu Lys Lys

<210> 374
 <211> 744
 <212> DNA
 <213> Homo sapiens

<400> 374

acggaccgag ggttcgaggg agggacacgg accaggaacc tgagctaggt 50
 caaagacgcc cgggccaggt gccccgtcgc aggtgccctt ggccggagat 100

gcggtaggag gggcgagcgc gagaagcccc ttcctcggcg ctgccaaccc 150
gccaccagc ccatggcgaa ccccgggctg gggctgcttc tggcgctggg 200
cctgccgttc ctgctggccc gctggggccg agcctggggg caaatacaga 250
ccacttctgc aaatgagaat agcactgttt tgccttcata caccagctcc 300
agctccgatg gcaacctgcg tccggaagcc atcactgcta tcatcgtggt 350
cttctccctc ttggctgcct tgctcctggc tgtggggctg gcaactgttg 400
tgcggaagct tcgggagaag cggcagacgg agggcaccta ccggcccagt 450
agcgaggagc agttctccca tgcagccgag gcccggggcc ctcaggactc 500
caaggagacg gtgcagggct gcctgcccac ctagggtccc tctcctgcat 550
ctgtctccct tcattgctgt gtgaccttgg ggaaaggcag tgccctctct 600
gggcagtcag atccaccag tgcttaatat cagggaagaa ggtacttcaa 650
agactctgcc cctgaggta agagaggatg gggctattca cttttatata 700
tttatataaa attagtagtg agatgtaaaa aaaaaaaaaa aaaa 744

<210> 375

<211> 123

<212> PRT

<213> Homo sapiens

<400> 375

Met	Ala	Asn	Pro	Gly	Leu	Gly	Leu	Leu	Leu	Ala	Leu	Gly	Leu	Pro
1				5					10					15
Phe	Leu	Leu	Ala	Arg	Trp	Gly	Arg	Ala	Trp	Gly	Gln	Ile	Gln	Thr
				20					25					30
Thr	Ser	Ala	Asn	Glu	Asn	Ser	Thr	Val	Leu	Pro	Ser	Ser	Thr	Ser
				35					40					45
Ser	Ser	Ser	Asp	Gly	Asn	Leu	Arg	Pro	Glu	Ala	Ile	Thr	Ala	Ile
				50					55					60
Ile	Val	Val	Phe	Ser	Leu	Leu	Ala	Ala	Leu	Leu	Leu	Ala	Val	Gly
				65					70					75
Leu	Ala	Leu	Leu	Val	Arg	Lys	Leu	Arg	Glu	Lys	Arg	Gln	Thr	Glu
				80					85					90
Gly	Thr	Tyr	Arg	Pro	Ser	Ser	Glu	Glu	Gln	Phe	Ser	His	Ala	Ala
				95					100					105
Glu	Ala	Arg	Ala	Pro	Gln	Asp	Ser	Lys	Glu	Thr	Val	Gln	Gly	Cys
				110					115					120

Leu Pro Ile

<210> 376

<211> 713

<212> DNA

<213> Homo sapiens

<400> 376

aatatatcat ctatttatca ttaatcaata atgtattctt ttattccaat 50
aacatttggg ttttgggatt ttaattttca aacacagcag aatgacattt 100
tttctgtcac tattattatt gttggtatgt gaagctattt ggagatccaa 150
ttcaggaagc aacacattgg agaattggcta ctttctatca agaaataaag 200
agaaccacag tcaaccacac caatcatctt tagaagacag tgtgactcct 250
accaaagctg tcaaaaccac aggcaagggc atagttaaag gacggaatct 300
tgactcaaga gggttaattc ttggtgctga agcctggggc aggggtgtaa 350
agaaaaacac ttagattcaa tgattgtaaa ttaaggcaa atacacatat 400
tagtattacc ttagtgtaat gtatccctgt catatataca ataaggtgaa 450
attataagta ccctatgcag ttggctggac agttctaaat tggactttat 500
taatttttaa aatcagtaac tgatttatca ctggctatgt gcttagatct 550
acaggagatc atataatttg atacaaataa aagaaaagtg ttctctcccc 600
ttacagaatt gacattttta atgcgataca gttagaatag gaaatatgac 650
attagaaagg aagaatgaca gggagaaaagg aaagaaggga aaatgttgcc 700
aaggaaaaaa aaa 713

<210> 377

<211> 90

<212> PRT

<213> Homo sapiens

<400> 377

Met	Thr	Phe	Phe	Leu	Ser	Leu	Leu	Leu	Leu	Val	Cys	Glu	Ala
1				5				10					15
Ile	Trp	Arg	Ser	Asn	Ser	Gly	Ser	Asn	Thr	Leu	Glu	Asn	Gly
				20				25					30
Phe	Leu	Ser	Arg	Asn	Lys	Glu	Asn	His	Ser	Gln	Pro	Thr	Gln
				35				40					45
Ser	Leu	Glu	Asp	Ser	Val	Thr	Pro	Thr	Lys	Ala	Val	Lys	Thr
				50				55					60
Gly	Lys	Gly	Ile	Val	Lys	Gly	Arg	Asn	Leu	Asp	Ser	Arg	Gly
				65				70					75
Ile	Leu	Gly	Ala	Glu	Ala	Trp	Gly	Arg	Gly	Val	Lys	Lys	Asn
				80				85					90

<210> 378

<211> 3265

<212> DNA

<213> Homo sapiens

<400> 378

gccaggaata actagagagg aacaatgggg ttattcagag gttttgtttt 50

cctcttagtt ctgtgcctgc tgcaccagtc aaatacttcc ttcattaagc 100
tgaataataa tggccttgaa gatattgtca ttgttataga tctagtgtg 150
ccagaagatg aaaaaataat tgaacaaata gaggatatgg tgactacagc 200
ttctacgtac ctgtttgaag ccacagaaaa aagatttttt ttcaaaaatg 250
tatctatatt aattcctgag aattggaagg aaaatcctca gtacaaaagg 300
ccaaaacatg aaaaccataa acatgctgat gttatagttg caccacctac 350
actcccaggt agagatgaac catacaccaa gcagttcaca gaatgtggag 400
agaaaggcga atacattcac ttcacccctg accttctact tggaaaaaaa 450
caaaatgaat atggaccacc aggcaaactg tttgtocatg agtgggctca 500
cctccggtgg ggagtgtttg atgagtacaa tgaagatcag cttttctacc 550
gtgctaagtc aaaaaaaatc gaagcaacaa ggtgttccgc aggtatctct 600
ggtagaaata gagtttataa gtgtcaagga ggcagctgtc ttagtagagc 650
atgcagaatt gattctacaa caaaactgta tggaaaagat tgtcaattct 700
ttcctgataa agtacaaaca gaaaaagcat ccataatgtt tatgcaaagt 750
attgattctg ttgttgaatt ttgtaacgaa aaaaccata atcaagaagc 800
tccaagccta caaaacataa agtgcaattt tagaagtaca tgggaggtga 850
ttagcaattc tgaggatttt aaaaacacca taccatggt gacaccacct 900
cctccacctg tcttctcatt gctgaagatc agtcaaagaa ttgtgtgctt 950
agttcttgat aagtctggaa gcatgggggg taaggaccgc ctaaatcgaa 1000
tgaatcaagc agcaaaacat ttctgtgtgc agaactgttg aaatggatcc 1050
tgggtgggga tgggtcactt tgatagtact gccactattg taaataagct 1100
aatccaaata aaaagcagtg atgaaagaaa cacactcatg gcaggattac 1150
ctacatatcc tctgggagga acttccatct gotctggaat taaatatgca 1200
tttcaggtga ttggagagct acattcccaa ctcgatggat ccgaagtact 1250
gctgctgact gatggggagg ataacactgc aagttcttgt attgatgaag 1300
tgaaacaaag tggggccatt gttcatttta ttgctttggg aagagctgct 1350
gatgaagcag taatagagat gagcaagata acaggaggaa gtcattttta 1400
tgtttcagat gaagctcaga acaatggcct cattgatgct tttggggctc 1450
ttacatcagg aaatactgat ctctcccaga agtcccttca gctcgaaagt 1500
aagggattaa cactgaatag taatgocctg atgaacgaca ctgtcataat 1550
tgatagtaca gtgggaaagg acacgttctt tctcatcaca tggaacagtc 1600
tgcctcccag tatttctctc tgggatccca gtggaacaat aatggaaaat 1650

ttcacagtgg atgcaacttc caaaatggcc tatctcagta ttccaggaac 1700
 tgcaaaggtg ggcacttggg catacaatct tcaagccaaa gcgaaccag 1750
 aaacattaac tattacagta acttctcgag cagcaaattc ttctgtgcct 1800
 ccaatcacag tgaatgctaa aatgaataag gacgtaaaca gtttccccag 1850
 cccaatgatt gtttacgcag aaattctaca aggatatgta cctgttcttg 1900
 gagccaatgt gactgctttc attgaatcac agaatggaca tacagaagtt 1950
 ttggaacttt tggataatgg tgcaggcgct gattctttca agaatgatgg 2000
 agtctactcc aggtatttta cagcatatac agaaaatggc agatatagct 2050
 taaaagtctg ggctcatgga ggagcaaaca ctgccaggct aaaattacgg 2100
 cctccactga atagagccgc gtacatacca ggctgggtag tgaacgggga 2150
 aattgaagca aaccgcgcaa gacctgaaat tgatgaggat actcagacca 2200
 ccttgaggga tttcagccga acagcatccg gaggtgcatt tgtggtatca 2250
 caagtcccaa gccttccctt gcctgaccaa taccaccaa gtcaaatac 2300
 agaccttgat gccacagttc atgaggataa gattattctt acatggacag 2350
 caccaggaga taattttgat gttggaaaag ttcaacgtta tatcataaga 2400
 ataagtcaa gtattcttga tctaagagac agttttgatg atgctcttca 2450
 agtaaatact actgatctgt caccaaagga ggccaactcc aaggaaagct 2500
 ttgcatttaa accagaaaat atctcagaag aaaatgcaac ccacatat 2550
 attgccatta aaagtataga taaaagcaat ttgacatcaa aagtatcaa 2600
 cattgcacaa gtaactttgt ttatccctca agcaaactct gatgacattg 2650
 atcctacacc tactcctact cctactccta ctcttgataa aagtcataat 2700
 tctggagtta atatttctac gctggatttg tctgtgattg ggtctgttgt 2750
 aattgttaac tttattttta gtaccaccat ttgaacctta acgaagaaaa 2800
 aaatcttcaa gtagacctag aagagagttt taaaaaaca aacaatgtaa 2850
 gtaaaggata tttctgaatc ttaaaattca tccatgtgt gatcataaac 2900
 tcataaaaaat aattttaaga tgtcggaaaa ggatactttg attaaataaa 2950
 aacactcatg gatatgtaa aactgtcaag attaaaattt aatagtttca 3000
 tttatttggt attttatttg taagaaatag tgatgaacaa agatcctttt 3050
 tcatactgat acctggttgt atattatttg atgcaacagt tttctgaaat 3100
 gatatttcaa attgcatcaa gaaattaaaa tcatctatct gagtagtcaa 3150
 aatacaagta aaggagagca aataaacaac atttggaata aaaaaaaaaa 3200
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3250

aaaaaaaaaa aaaaa 3265

<210> 379

<211> 919

<212> PRT

<213> Homo sapiens

<400> 379

Met	Gly	Leu	Phe	Arg	Gly	Phe	Val	Phe	Leu	Leu	Val	Leu	Cys	Leu
1				5					10					15
Leu	His	Gln	Ser	Asn	Thr	Ser	Phe	Ile	Lys	Leu	Asn	Asn	Asn	Gly
				20					25					30
Phe	Glu	Asp	Ile	Val	Ile	Val	Ile	Asp	Pro	Ser	Val	Pro	Glu	Asp
				35					40					45
Glu	Lys	Ile	Ile	Glu	Gln	Ile	Glu	Asp	Met	Val	Thr	Thr	Ala	Ser
				50					55					60
Thr	Tyr	Leu	Phe	Glu	Ala	Thr	Glu	Lys	Arg	Phe	Phe	Phe	Lys	Asn
				65					70					75
Val	Ser	Ile	Leu	Ile	Pro	Glu	Asn	Trp	Lys	Glu	Asn	Pro	Gln	Tyr
				80					85					90
Lys	Arg	Pro	Lys	His	Glu	Asn	His	Lys	His	Ala	Asp	Val	Ile	Val
				95					100					105
Ala	Pro	Pro	Thr	Leu	Pro	Gly	Arg	Asp	Glu	Pro	Tyr	Thr	Lys	Gln
				110					115					120
Phe	Thr	Glu	Cys	Gly	Glu	Lys	Gly	Glu	Tyr	Ile	His	Phe	Thr	Pro
				125					130					135
Asp	Leu	Leu	Leu	Gly	Lys	Lys	Gln	Asn	Glu	Tyr	Gly	Pro	Pro	Gly
				140					145					150
Lys	Leu	Phe	Val	His	Glu	Trp	Ala	His	Leu	Arg	Trp	Gly	Val	Phe
				155					160					165
Asp	Glu	Tyr	Asn	Glu	Asp	Gln	Pro	Phe	Tyr	Arg	Ala	Lys	Ser	Lys
				170					175					180
Lys	Ile	Glu	Ala	Thr	Arg	Cys	Ser	Ala	Gly	Ile	Ser	Gly	Arg	Asn
				185					190					195
Arg	Val	Tyr	Lys	Cys	Gln	Gly	Gly	Ser	Cys	Leu	Ser	Arg	Ala	Cys
				200					205					210
Arg	Ile	Asp	Ser	Thr	Thr	Lys	Leu	Tyr	Gly	Lys	Asp	Cys	Gln	Phe
				215					220					225
Phe	Pro	Asp	Lys	Val	Gln	Thr	Glu	Lys	Ala	Ser	Ile	Met	Phe	Met
				230					235					240
Gln	Ser	Ile	Asp	Ser	Val	Val	Glu	Phe	Cys	Asn	Glu	Lys	Thr	His
				245					250					255
Asn	Gln	Glu	Ala	Pro	Ser	Leu	Gln	Asn	Ile	Lys	Cys	Asn	Phe	Arg
				260					265					270
Ser	Thr	Trp	Glu	Val	Ile	Ser	Asn	Ser	Glu	Asp	Phe	Lys	Asn	Thr

				275					280					285
Ile	Pro	Met	Val	Thr 290	Pro	Pro	Pro	Pro	Pro 295	Val	Phe	Ser	Leu	Leu 300
Lys	Ile	Ser	Gln	Arg 305	Ile	Val	Cys	Leu	Val 310	Leu	Asp	Lys	Ser	Gly 315
Ser	Met	Gly	Gly	Lys 320	Asp	Arg	Leu	Asn	Arg 325	Met	Asn	Gln	Ala	Ala 330
Lys	His	Phe	Leu	Leu 335	Gln	Thr	Val	Glu	Asn 340	Gly	Ser	Trp	Val	Gly 345
Met	Val	His	Phe	Asp 350	Ser	Thr	Ala	Thr	Ile 355	Val	Asn	Lys	Leu	Ile 360
Gln	Ile	Lys	Ser	Ser 365	Asp	Glu	Arg	Asn	Thr 370	Leu	Met	Ala	Gly	Leu 375
Pro	Thr	Tyr	Pro	Leu 380	Gly	Gly	Thr	Ser	Ile 385	Cys	Ser	Gly	Ile	Lys 390
Tyr	Ala	Phe	Gln	Val 395	Ile	Gly	Glu	Leu	His 400	Ser	Gln	Leu	Asp	Gly 405
Ser	Glu	Val	Leu	Leu 410	Leu	Thr	Asp	Gly	Glu 415	Asp	Asn	Thr	Ala	Ser 420
Ser	Cys	Ile	Asp	Glu 425	Val	Lys	Gln	Ser	Gly 430	Ala	Ile	Val	His	Phe 435
Ile	Ala	Leu	Gly	Arg 440	Ala	Ala	Asp	Glu	Ala 445	Val	Ile	Glu	Met	Ser 450
Lys	Ile	Thr	Gly	Gly 455	Ser	His	Phe	Tyr	Val 460	Ser	Asp	Glu	Ala	Gln 465
Asn	Asn	Gly	Leu	Ile 470	Asp	Ala	Phe	Gly	Ala 475	Leu	Thr	Ser	Gly	Asn 480
Thr	Asp	Leu	Ser	Gln 485	Lys	Ser	Leu	Gln	Leu 490	Glu	Ser	Lys	Gly	Leu 495
Thr	Leu	Asn	Ser	Asn 500	Ala	Trp	Met	Asn	Asp 505	Thr	Val	Ile	Ile	Asp 510
Ser	Thr	Val	Gly	Lys 515	Asp	Thr	Phe	Phe	Leu 520	Ile	Thr	Trp	Asn	Ser 525
Leu	Pro	Pro	Ser	Ile 530	Ser	Leu	Trp	Asp	Pro 535	Ser	Gly	Thr	Ile	Met 540
Glu	Asn	Phe	Thr	Val 545	Asp	Ala	Thr	Ser	Lys 550	Met	Ala	Tyr	Leu	Ser 555
Ile	Pro	Gly	Thr	Ala 560	Lys	Val	Gly	Thr	Trp 565	Ala	Tyr	Asn	Leu	Gln 570
Ala	Lys	Ala	Asn	Pro 575	Glu	Thr	Leu	Thr	Ile 580	Thr	Val	Thr	Ser	Arg 585
Ala	Ala	Asn	Ser	Ser	Val	Pro	Pro	Ile	Thr	Val	Asn	Ala	Lys	Met

Ser Thr Thr Ile

<210> 380

<211> 3877

<212> DNA

<213> Homo sapiens

<400> 380

```

ctccttaggt ggaaaccctg ggagtagagt actgacagca aagaccggga 50
aagaccatac gtccccgggc aggggtgaca acaggtgtca tctttttgat 100
ctcgtgtgtg gctgccttcc tatttcaagg aaagacgcca aggtaatttt 150
gaccagagg agcaatgatg tagccacctc ctaaccttcc cttcttgaac 200
ccccagttat gccaggattt actagagagt gtcaactcaa ccagcaagcg 250
gctccttcgg cttaacttgt gggtggagga gagaaccttt gtggggctgc 300
gttctcttag cagtgtcag aagtgacttg cctgagggtg gaccagaaga 350
aaggaaaggt cccctcttgc tgttggtgc acatcaggaa ggctgtgatg 400
ggaatgaagg tgaaaacttg gagatttcac ttcagtcatt gcttctgcct 450
gcaagatcat cctttaaaag tagagaagct gctctgtgtg gtggttaact 500
ccaagaggca gaactcgttc tagaaggaaa tggatgcaag cagctccggg 550
ggccccaaac gcatgcttcc tgtggtctag cccagggaag cccttccttg 600
ggggccccgg ctttgaggga tgccaccggt tctggacgca tggctgattc 650
ctgaatgatg atggttcgcc gggggctgct tgcgtggatt tcccgggtgg 700
tggttttgcg ggtgctctc tgctgtgcta tctctgtcct gtacatgttg 750
gcctgcaccc caaaaggtga cgaggagcag ctggcactgc ccagggccaa 800
cagccccacg ggaaggagg ggtaccaggc cgtccttcag gagtgggagg 850
agcagcaccg caactacgtg agcagcctga agcggcagat cgcacagctc 900
aaggaggagc tgcaggagag gaggtagcag ctcaggaatg ggcagtacca 950
agccagcgat gctgctggcc tgggtctgga caggagcccc ccagagaaaa 1000
cccaggccga cctcctggcc ttctgcact cgcaggtgga caaggcagag 1050
gtgaatgctg gcgtcaagct ggccacagag tatgcagcag tgcctttcga 1100
tagctttact ctacagaagg tgtaccagct ggagactggc cttaccgcc 1150
accccgagga gaagcctgtg aggaaggaca agcgggatga gttggtgaa 1200
gccattgaat cagccttga gacctgaac aatcctgcag agaacagccc 1250
caatcaccgt ccttacacgg cctctgattt catagaaggg atctaccgaa 1300

```

cagaaaggga caaaggga ttgtatgagc tcaccttcaa aggggaccac 1350
aaacacgaat tcaaacggct catottattt cgaccattca gcccacatcat 1400
gaaagtgaat aatgaaaagc tcaacatggc caaacgctt atcaatgtta 1450
tcgtgcctct agcaaaaagg gtggacaagt tccggcagtt catgcagaat 1500
ttcaggggaga tgtgcattga gcaggatggg agagtccatc tcaactgttg 1550
ttactttggg aaagaagaaa taaatgaagt caaaggaata cttgaaaaca 1600
cttccaaagc tgccaacttc aggaacttta ccttcatcca gctgaatgga 1650
gaattttctc ggggaaaggg acttgatggt ggagcccgct tctggaaggg 1700
aagcaacgct cttctctttt tctgtgatgt ggacatctac ttcacatctg 1750
aattcctcaa tacgtgtagg ctgaatacac agccaggga gaaggtat 1800
tatccagttc ttttcagtca gtacaatcct ggcataatat acggccacca 1850
tgatgcagtc cctcccttgg aacagcagct ggtcataaag aaggaaactg 1900
gattttggag agactttgga tttgggatga cgtgtcagta tcggtcagac 1950
ttcatcaata taggtgggtt tgatctggac atcaaaggct ggggcggaga 2000
ggatgtgcac ctttatcgca agtatctcca cagcaacctc atagtggtag 2050
ggacgcctgt gcgaggactc ttccacctct ggcatgagaa gcgctgcatg 2100
gacgagctga ccccgagca gtacaagatg tgcatgcagt ccaaggccat 2150
gaacgaggca tcccacggcc agctgggcat gctggtgttc aggcacgaga 2200
tagaggctca ctttcgcaaa cagaaacaga agacaagtag caaaaaaaca 2250
tgaactccca gagaaggatt gtgggagaca ctttttcttt ctttttgcaa 2300
ttactgaaag tggctgcaac agagaaaaga cttccataaa ggacgacaaa 2350
agaattggac tgatgggtca gagatgagaa agcctccgat ttctctctgt 2400
tgggcttttt acaacagaaa tcaaaatctc cgctttgcct gcaaaagtaa 2450
cccagttgca ccctgtgaag tgtctgacaa aggcagaatg cttgtgagat 2500
tataagccta atggtgtgga ggttttgatg gtgtttacaa tacactgaga 2550
cctgttggtt tgtgtgctca ttgaaatatt catgatttaa gagcagtttt 2600
gtaaaaaatt cattagcatg aaaggcaagc atatttctcc tcatatgaat 2650
gagcctatca gcagggtct agtttctagg aatgctaaaa tatcagaagg 2700
caggagagga gataggctta ttatgatact agtgagtaca ttaagtaaaa 2750
taaatggac cagaaaagaa aagaaaccat aaatatcgtg tcatattttc 2800
ccaagatta accaaaaata atctgcttat ctttttggtt gtccttttaa 2850
ctgtctccgt ttttttcttt tatttaaaaa tgcaactttt ttcccttggtg 2900

agttatagtc tgcttattta attaccactt tgcaagcctt acaagagagc 2950
 acaagttggc ctacattttt atatttttta agaagatact ttgagatgca 3000
 ttatgagaac tttcagttca aagcatcaaa ttgatgccat atccaaggac 3050
 atgccaaatg ctgattctgt caggcactga atgtcaggca ttgagacata 3100
 gggaaggaat ggtttgtact aatacagacg tacagatact ttctctgaag 3150
 agtattttcg aagaggagca actgaacact ggaggaaaag aaaatgacac 3200
 tttctgcttt acagaaaagg aaactcattc agactgggtga tatcgtgatg 3250
 tacctaaaag tcagaaacca cattttctcc tcagaagtag ggaccgcttt 3300
 cttacctgtt taaataaacc aaagtatacc gtgtgaacca aacaatctct 3350
 tttcaaaaca ggggtgctcct cctggcttct ggcttcata agaagaaatg 3400
 gagaaaaata tatatatata tatatatatt gtgaaagatc aatccatctg 3450
 ccagaatcta gtgggatgga agtttttgcg acatgttata caccacaggc 3500
 cagggtggaag taactgaatt attttttaaa ttaagcagtt ctactcaatc 3550
 accaagatgc ttctgaaaat tgcattttat taccatttca aactattttt 3600
 taaaaataaa tacagttaac atagagtggg ttcttcattc atgtgaaaat 3650
 tattagccag caccagatgc atgagctaata tatctctttg agtccttgct 3700
 tctgtttgct cacagtaaac tcattgttta aaagcttcaa gaacattcaa 3750
 gctgttggtg tgtaaaaaaa tgcattgtat tgatttgtac tggtagttaa 3800
 tgaaatttaa ttaaaacaca ggccatgaat ggaaggtggg attgcacagc 3850
 taataaaata tgatttgtgg atatgaa 3877

<210> 381

<211> 532

<212> PRT

<213> Homo sapiens

<400> 381

Met	Met	Met	Val	Arg	Arg	Gly	Leu	Leu	Ala	Trp	Ile	Ser	Arg	Val
1				5					10					15

Val	Val	Leu	Leu	Val	Leu	Leu	Cys	Cys	Ala	Ile	Ser	Val	Leu	Tyr
				20					25					30

Met	Leu	Ala	Cys	Thr	Pro	Lys	Gly	Asp	Glu	Glu	Gln	Leu	Ala	Leu
				35					40					45

Pro	Arg	Ala	Asn	Ser	Pro	Thr	Gly	Lys	Glu	Gly	Tyr	Gln	Ala	Val
				50					55					60

Leu	Gln	Glu	Trp	Glu	Glu	Gln	His	Arg	Asn	Tyr	Val	Ser	Ser	Leu
				65					70					75

Lys	Arg	Gln	Ile	Ala	Gln	Leu	Lys	Glu	Glu	Leu	Gln	Glu	Arg	Ser
				80					85					90

Glu	Gln	Leu	Arg	Asn	Gly	Gln	Tyr	Gln	Ala	Ser	Asp	Ala	Ala	Gly	
				95					100					105	
Leu	Gly	Leu	Asp	Arg	Ser	Pro	Pro	Glu	Lys	Thr	Gln	Ala	Asp	Leu	
				110					115					120	
Leu	Ala	Phe	Leu	His	Ser	Gln	Val	Asp	Lys	Ala	Glu	Val	Asn	Ala	
				125					130					135	
Gly	Val	Lys	Leu	Ala	Thr	Glu	Tyr	Ala	Ala	Val	Pro	Phe	Asp	Ser	
				140					145					150	
Phe	Thr	Leu	Gln	Lys	Val	Tyr	Gln	Leu	Glu	Thr	Gly	Leu	Thr	Arg	
				155					160					165	
His	Pro	Glu	Glu	Lys	Pro	Val	Arg	Lys	Asp	Lys	Arg	Asp	Glu	Leu	
				170					175					180	
Val	Glu	Ala	Ile	Glu	Ser	Ala	Leu	Glu	Thr	Leu	Asn	Asn	Pro	Ala	
				185					190					195	
Glu	Asn	Ser	Pro	Asn	His	Arg	Pro	Tyr	Thr	Ala	Ser	Asp	Phe	Ile	
				200					205					210	
Glu	Gly	Ile	Tyr	Arg	Thr	Glu	Arg	Asp	Lys	Gly	Thr	Leu	Tyr	Glu	
				215					220					225	
Leu	Thr	Phe	Lys	Gly	Asp	His	Lys	His	Glu	Phe	Lys	Arg	Leu	Ile	
				230					235					240	
Leu	Phe	Arg	Pro	Phe	Ser	Pro	Ile	Met	Lys	Val	Lys	Asn	Glu	Lys	
				245					250					255	
Leu	Asn	Met	Ala	Asn	Thr	Leu	Ile	Asn	Val	Ile	Val	Pro	Leu	Ala	
				260					265					270	
Lys	Arg	Val	Asp	Lys	Phe	Arg	Gln	Phe	Met	Gln	Asn	Phe	Arg	Glu	
				275					280					285	
Met	Cys	Ile	Glu	Gln	Asp	Gly	Arg	Val	His	Leu	Thr	Val	Val	Tyr	
				290					295					300	
Phe	Gly	Lys	Glu	Glu	Ile	Asn	Glu	Val	Lys	Gly	Ile	Leu	Glu	Asn	
				305					310					315	
Thr	Ser	Lys	Ala	Ala	Asn	Phe	Arg	Asn	Phe	Thr	Phe	Ile	Gln	Leu	
				320					325					330	
Asn	Gly	Glu	Phe	Ser	Arg	Gly	Lys	Gly	Leu	Asp	Val	Gly	Ala	Arg	
				335					340					345	
Phe	Trp	Lys	Gly	Ser	Asn	Val	Leu	Leu	Phe	Phe	Cys	Asp	Val	Asp	
				350					355					360	
Ile	Tyr	Phe	Thr	Ser	Glu	Phe	Leu	Asn	Thr	Cys	Arg	Leu	Asn	Thr	
				365					370					375	
Gln	Pro	Gly	Lys	Lys	Val	Phe	Tyr	Pro	Val	Leu	Phe	Ser	Gln	Tyr	
				380					385					390	
Asn	Pro	Gly	Ile	Ile	Tyr	Gly	His	His	Asp	Ala	Val	Pro	Pro	Leu	
				395					400					405	

Glu	Gln	Gln	Leu	Val	Ile	Lys	Lys	Glu	Thr	Gly	Phe	Trp	Arg	Asp	
				410					415					420	
Phe	Gly	Phe	Gly	Met	Thr	Cys	Gln	Tyr	Arg	Ser	Asp	Phe	Ile	Asn	
				425					430					435	
Ile	Gly	Gly	Phe	Asp	Leu	Asp	Ile	Lys	Gly	Trp	Gly	Gly	Glu	Asp	
				440					445					450	
Val	His	Leu	Tyr	Arg	Lys	Tyr	Leu	His	Ser	Asn	Leu	Ile	Val	Val	
				455					460					465	
Arg	Thr	Pro	Val	Arg	Gly	Leu	Phe	His	Leu	Trp	His	Glu	Lys	Arg	
				470					475					480	
Cys	Met	Asp	Glu	Leu	Thr	Pro	Glu	Gln	Tyr	Lys	Met	Cys	Met	Gln	
				485					490					495	
Ser	Lys	Ala	Met	Asn	Glu	Ala	Ser	His	Gly	Gln	Leu	Gly	Met	Leu	
				500					505					510	
Val	Phe	Arg	His	Glu	Ile	Glu	Ala	His	Leu	Arg	Lys	Gln	Lys	Gln	
				515					520					525	
Lys	Thr	Ser	Ser	Lys	Lys	Thr									
				530											

<210> 382

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 382

ctcggggaaa gggacttgat gttgg 25

<210> 383

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 383

gcgaaggtga gcctctatct cgtgcc 26

<210> 384

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 384

cagcctacac gtattgagg 19

<210> 385

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 385

cagtcagtac aatcctggca taatatacgg ccaccatgat gcagtccc 48

<210> 386

<211> 1346

<212> DNA

<213> Homo sapiens

<400> 386

gaaagaatgt tgtggctgct cttttttctg gtgactgccca ttcattgctga 50
actctgtcaa ccagggtgcag aaaatgcttt taaagtgaga cttagtatca 100
gaacagctct gggagataaa gcatatgcct gggataccaa tgaagaatac 150
ctcttcaaag cgatggtagc tttctccatg agaaaagtgc ccaacagaga 200
agcaacagaa atttcccatg tcctactttg caatgtaacc cagagggtat 250
cattctggtt tgtgggttaca gacccttcaa aaaatcacac ccttctgct 300
gttgagggtgc aatcagccat aagaatgaac aagaaccgga tcaacaatgc 350
cttcttttcta aatgaccaa ctctggaatt tttaaaaatc ccttccacac 400
ttgcaccacc catggaccca tctgtgccca tctggattat tatatttggt 450
gtgatatttt gcatcatcat agttgcaatt gcactactga ttttatcagg 500
gatctggcaa cgtagaagaa agaacaagaa accatctgaa gtggatgacg 550
ctgaagataa gtgtgaaaac atgatcacia ttgaaaatgg catcccctct 600
gatcccctgg acatgaaggg gggcatatta atgatgcctt catgacagag 650
gatgagaggc tcacccctct ctgaagggtt gttgtttctgc ttcctcaaga 700
aattaaacat ttgtttctgt gtgactgctg agcatcctga aataccaaga 750
gcagatcata tattttgttt caccattctt cttttgtaat aaattttgaa 800
tgtgcttgaa agtgaaaagc aatcaattat accaccaac accactgaaa 850
tcataagcta ttcacgactc aaaatattct aaaatatatt tctgacagta 900
tagtgtataa atgtgggtcat gtggtatttg tagttattga ttttaagcatt 950
tttagaaata agatcaggca tatgtatata ttttcacact tcaaagacct 1000
aaggaaaaat aaattttcca gtggagaata catataatat ggtgtagaaa 1050
tcattgaaaa tggatccttt ttgacgatca cttatatcac tctgtatatg 1100
actaagtaaa caaaagttag aagtaattat tgtaaatgga tggataaaaa 1150
tggaattact catatacagg gtggaatttt atcctgttat cacaccaaca 1200
gttgattata tattttctga atatcagccc ctaataggac aattctatatt 1250

gttgaccatt tctacaattt gtaaaagtcc aatctgtgct aacttaataa 1300

agtaataatc atctcttttt aaaaaaaaaa aaaaaaaaaa aaaaaa 1346

<210> 387

<211> 212

<212> PRT

<213> Homo sapiens

<400> 387

Met Leu Trp Leu Leu Phe Phe Leu Val Thr Ala Ile His Ala Glu
1 5 10 15

Leu Cys Gln Pro Gly Ala Glu Asn Ala Phe Lys Val Arg Leu Ser
20 25 30

Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr Ala Trp Asp Thr Asn
35 40 45

Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe Ser Met Arg Lys
50 55 60

Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val Leu Leu Cys
65 70 75

Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr Asp Pro
80 85 90

Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala Ile
95 100 105

Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
110 115 120

Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro
125 130 135

Met Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile
140 145 150

Phe Cys Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly
155 160 165

Ile Trp Gln Arg Arg Arg Lys Asn Lys Glu Pro Ser Glu Val Asp
170 175 180

Asp Ala Glu Asp Lys Cys Glu Asn Met Ile Thr Ile Glu Asn Gly
185 190 195

Ile Pro Ser Asp Pro Leu Asp Met Lys Gly Gly Ile Leu Met Met
200 205 210

Pro Ser

<210> 388

<211> 1371

<212> DNA

<213> Homo sapiens

<400> 388

aactcaaact cctctctctg ggaaaacgcg gtgcttgctc ctcccggagt 50

ggcccttgga ggggtgttga gccctcggtc tgccccgtcc ggtctctggg 100
 gccaaggctg gggttccctc atgtatggca agagctctac tcgtgcgggtg 150
 cttcttctcc ttggcataca gctcacagct ctttggccta tagcagctgt 200
 ggaaatttat acctcccggg tgctggaggc tgttaatggg acagatgctc 250
 ggtaaaaatg cactttctcc agctttgccc ctgtgggtga tgctctaaca 300
 gtgacctgga attttcgtcc tctagacggg ggacctgagc agtttgtatt 350
 ctactaccac atagatccct tccaacccat gagtggggcg ttaaggacc 400
 ggggtgtcttg ggatgggaat cctgagcggg acgatgcctc catccttctc 450
 tggaaactgc agttcgacga caatgggaca tacacctgcc aggtgaagaa 500
 cccacctgat gttgatgggg tgatagggga gatccggctc agcgtcgtgc 550
 aactgtacg cttctctgag atccacttcc tggtcttggc cattggctct 600
 gcctgtgcac tgatgatcat aatagtaatt gtagtgggtc tcttcagca 650
 ttaccgaaa aagcgatggg ccgaaagagc tcataaagtg gtggagataa 700
 aatcaaaaaga agaggaaagg ctcaaccaag agaaaaaggt ctctgtttat 750
 ttagaagaca cagactaaca attttagatg gaagctgaga tgatttcaa 800
 gaacaagaac cctagtattt cttgaagtta atggaaactt ttctttggct 850
 tttccagttg tgaccggtt tccaaccagt tctgcagcat attagattct 900
 agacaagcaa caccctctg gagccagcac agtgctcctc catatcacca 950
 gtcatacaca gcctcattat taaggtotta ttttaatttca gagtgtaaat 1000
 tttttcaagt gctcattagg ttttataaac aagaagctac atttttgccc 1050
 ttaagacact acttacagtg ttatgacttg tatacacata tattggatc 1100
 aaaggggata aaagccaatt tgtctgttac atttcctttc acgtatttct 1150
 tttagcagca cttctgctac taaagttaat gtgtttactc tctttccttc 1200
 ccacattctc aattaaaagg tgagctaagc ctctcgggtg tttctgatta 1250
 acagtaaadc ctaaattcaa actgttaaact gacattttta tttttatgtc 1300
 tctccttaac tatgagacac atcttggttt actgaatttc tttcaatatt 1350
 ccaggtgata gatttttgtc g 1371

<210> 389

<211> 215

<212> PRT

<213> Homo sapiens

<400> 389

Met	Tyr	Gly	Lys	Ser	Ser	Thr	Arg	Ala	Val	Leu	Leu	Leu	Leu	Gly
1				5					10					15

Ile	Gln	Leu	Thr	Ala	Leu	Trp	Pro	Ile	Ala	Ala	Val	Glu	Ile	Tyr	
				20					25					30	
Thr	Ser	Arg	Val	Leu	Glu	Ala	Val	Asn	Gly	Thr	Asp	Ala	Arg	Leu	
				35					40					45	
Lys	Cys	Thr	Phe	Ser	Ser	Phe	Ala	Pro	Val	Gly	Asp	Ala	Leu	Thr	
				50					55					60	
Val	Thr	Trp	Asn	Phe	Arg	Pro	Leu	Asp	Gly	Gly	Pro	Glu	Gln	Phe	
				65					70					75	
Val	Phe	Tyr	Tyr	His	Ile	Asp	Pro	Phe	Gln	Pro	Met	Ser	Gly	Arg	
				80					85					90	
Phe	Lys	Asp	Arg	Val	Ser	Trp	Asp	Gly	Asn	Pro	Glu	Arg	Tyr	Asp	
				95					100					105	
Ala	Ser	Ile	Leu	Leu	Trp	Lys	Leu	Gln	Phe	Asp	Asp	Asn	Gly	Thr	
				110					115					120	
Tyr	Thr	Cys	Gln	Val	Lys	Asn	Pro	Pro	Asp	Val	Asp	Gly	Val	Ile	
				125					130					135	
Gly	Glu	Ile	Arg	Leu	Ser	Val	Val	His	Thr	Val	Arg	Phe	Ser	Glu	
				140					145					150	
Ile	His	Phe	Leu	Ala	Leu	Ala	Ile	Gly	Ser	Ala	Cys	Ala	Leu	Met	
				155					160					165	
Ile	Ile	Ile	Val	Ile	Val	Val	Val	Leu	Phe	Gln	His	Tyr	Arg	Lys	
				170					175					180	
Lys	Arg	Trp	Ala	Glu	Arg	Ala	His	Lys	Val	Val	Glu	Ile	Lys	Ser	
				185					190					195	
Lys	Glu	Glu	Glu	Arg	Leu	Asn	Gln	Glu	Lys	Lys	Val	Ser	Val	Tyr	
				200					205					210	
Leu	Glu	Asp	Thr	Asp											
				215											

<210> 390

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 390

ccgaggccat ctagaggcca gagc 24

<210> 391

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

acaggcagag ccaatggcca gagc 24

<210> 392
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 392
 gagaggactg cgggagtttg ggacctttgt gcagacgtgc tcatg 45

<210> 393
 <211> 471
 <212> DNA
 <213> Homo sapiens

<400> 393
 gcatttttgt ctgtgctccc tgatcttcag gtcaccacca tgaagttctt 50
 agcagtcctg gtactcttgg gagtttccat ctttctgggc tctgcccaga 100
 atccgacaac agctgctcca gctgacacgt atccagctac tggctctgct 150
 gatgatgaag cccctgatgc tgaaccact gctgctgcaa ccactgcgac 200
 cactgctgct cctaccactg caaccaccgc tgcttctacc actgctcgta 250
 aagacattcc agttttaccc aaatgggttg gggatctccc gaatggtaga 300
 gtgtgtccct gagatggaat cagcttgagt cttctgcaat tggtcacaac 350
 tattcatgct tcctgtgatt tcatccaact acttaccttg cctacgatat 400
 cccctttatc tctaatacgt ttattttctt tcaaataaaa aataactatg 450
 agcaacataa aaaaaaaaaa a 471

<210> 394
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 394
 Met Lys Phe Leu Ala Val Leu Val Leu Leu Gly Val Ser Ile Phe
 1 5 10 15
 Leu Val Ser Ala Gln Asn Pro Thr Thr Ala Ala Pro Ala Asp Thr
 20 25 30
 Tyr Pro Ala Thr Gly Pro Ala Asp Asp Glu Ala Pro Asp Ala Glu
 35 40 45
 Thr Thr Ala Ala Ala Thr Thr Ala Thr Thr Ala Ala Pro Thr Thr
 50 55 60
 Ala Thr Thr Ala Ala Ser Thr Thr Ala Arg Lys Asp Ile Pro Val
 65 70 75
 Leu Pro Lys Trp Val Gly Asp Leu Pro Asn Gly Arg Val Cys Pro
 80 85 90

<210> 395
 <211> 25

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 395
gctccctgat cttcatgtca ccacc 25

<210> 396
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 396
cagggacaca ctctaccatt cgggag 26

<210> 397
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 397
ccatctttct ggtctctgcc cagaatccga caacagctgc tc 42

<210> 398
<211> 907
<212> DNA
<213> Homo sapiens

<400> 398
ggactctgaa ggtcccaagc agctgctgag gcccccaagg aagtgggttc 50
aaccttgga cccataggggt ctggatttgc tggtaacaa gataacctga 100
gggcaggacc ccatagggga atgctacctc ctgcccttcc acctgccctg 150
gtgttcacgg tggcctggtc cctccttgcc gagagagtgt cctgggtcag 200
ggacgcagag gacgctcaca gactccagcc ctttggttacc gagaggacac 250
ttggcaaggt ccagcgatgg tccggagtcc acacacagac tggcggcagg 300
gcaggagggg gacagttctg ttgtgcttgg ttggacagta agaggggtctt 350
ggccagtcca ggtggtggggg cggtggtggt cgtggtggtg cgtggtggtg 400
gggtggtggt cgtggtggtg cgtggtggtg cgtggtggtg cgtggtggtg 450
ggagtggcac gaggtggggc tttgtgccag taaaaccaca ggctggattt 500
gcctgctggc catggtccct gtctagggca gcaattctca accttcttgc 550
tctcaggacc ccaaagagct ttcattgtat ctattgattt ttaccacatt 600
agcaattaaa actgagaaat gggccgggca cgggtgggtca cgctgtaat 650

cccagcactt tgggaggccg aggcgggtgg atcacctgag atcaggagtt 700
 caagaccagc ctggccaaca tgggtgaaacc ttgtctacta aaaatacaaa 750
 aaattagcca ggcacagtgg tgtgcactgg tagtcccagt tactcgggag 800
 gctgaggcag gaaaatcgct tgaaccacag aggcggacgt tgcggtgagc 850
 cgagatcgcg ccgctgattc cagcctgggc gacaagagtg agactccatc 900
 tcacaca 907

<210> 399
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 399
 Met Leu Pro Pro Ala Leu Pro Pro Ala Leu Val Phe Thr Val Ala
 1 5 10 15
 Trp Ser Leu Leu Ala Glu Arg Val Ser Trp Val Arg Asp Ala Glu
 20 25 30
 Asp Ala His Arg Leu Gln Pro Phe Val Thr Glu Arg Thr Leu Gly
 35 40 45
 Lys Val Gln Arg Trp Ser Gly Val His Thr Gln Thr Gly Gly Arg
 50 55 60
 Ala Gly Gly Gly Gln Phe Cys Cys Ala Trp Leu Asp Ser Lys Arg
 65 70 75
 Val Leu Ala Ser Pro Gly Trp Gly Ala Ala Asn Ser Ile Lys Asn
 80 85 90
 Gln Arg Val Trp Ala Pro Ala Thr Glu Ser Ser Ala Gln Leu Leu
 95 100 105
 Cys Cys Trp Pro Val Gly Val Ala Arg Gly Gly Ala Leu Cys Gln
 110 115 120

<210> 400
 <211> 893
 <212> DNA
 <213> Homo sapiens

<400> 400
 gtcatgccag tgctgtctct gtgcctgctc tgggccctgg caatggtgac 50
 ccggcctgcc tcagcggccc ccatgggcgg ccagaaactg gcacagcatg 100
 aggagctgac cctgtctctc catgggaccc tgcagctggg ccaggccctc 150
 aacggtgtgt acaggaccac ggagggacgg ctgacaaagg ccaggaacag 200
 cctgggtctc tatggccgca caatagaact cctggggcag gaggtcagcc 250
 ggggccggga tgcagcccag gaacttcggg caagcctgtt ggagactcag 300
 atggaggagg atattctgca gctgcaggca gaggccacag ctgaggtgct 350
 gggggagggtg gcccaggcac agaagggtgct acgggacagc gtgcagcggc 400

tagaagtcca gctgaggagc gcctggctgg gccctgccta ccgagaattt 450
 gaggtcttaa aggctcacgc tgacaagcag agccacatcc tatgggccct 500
 cacaggccac gtgcagcggc agaggcggga gatggtggca cagcagcatc 550
 ggctgcgaca gatccaggag agactccaca cagcggcgct cccagcctga 600
 atctgcctgg atggaactga ggaccaatca tgctgcaagg aacacttcca 650
 cgccccgtga ggccccgtg cagggaggag ctgcctgttc actgggatca 700
 gccagggcgc cgggccccac ttctgagcac agagcagaga cagacgcagg 750
 cggggacaaa ggcagaggat gtagccocat tggggagggg tggaggaagg 800
 acatgtaccc tttcatgcct acacaccctt cattaaagca gagtcgtggc 850
 atttcaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa 893

<210> 401

<211> 198

<212> PRT

<213> Homo sapiens

<400> 401

Met	Pro	Val	Pro	Ala	Leu	Cys	Leu	Leu	Trp	Ala	Leu	Ala	Met	Val
1				5					10					15
Thr	Arg	Pro	Ala	Ser	Ala	Ala	Pro	Met	Gly	Gly	Pro	Glu	Leu	Ala
				20					25					30
Gln	His	Glu	Glu	Leu	Thr	Leu	Leu	Phe	His	Gly	Thr	Leu	Gln	Leu
				35					40					45
Gly	Gln	Ala	Leu	Asn	Gly	Val	Tyr	Arg	Thr	Thr	Glu	Gly	Arg	Leu
				50					55					60
Thr	Lys	Ala	Arg	Asn	Ser	Leu	Gly	Leu	Tyr	Gly	Arg	Thr	Ile	Glu
				65					70					75
Leu	Leu	Gly	Gln	Glu	Val	Ser	Arg	Gly	Arg	Asp	Ala	Ala	Gln	Glu
				80					85					90
Leu	Arg	Ala	Ser	Leu	Leu	Glu	Thr	Gln	Met	Glu	Glu	Asp	Ile	Leu
				95					100					105
Gln	Leu	Gln	Ala	Glu	Ala	Thr	Ala	Glu	Val	Leu	Gly	Glu	Val	Ala
				110					115					120
Gln	Ala	Gln	Lys	Val	Leu	Arg	Asp	Ser	Val	Gln	Arg	Leu	Glu	Val
				125					130					135
Gln	Leu	Arg	Ser	Ala	Trp	Leu	Gly	Pro	Ala	Tyr	Arg	Glu	Phe	Glu
				140					145					150
Val	Leu	Lys	Ala	His	Ala	Asp	Lys	Gln	Ser	His	Ile	Leu	Trp	Ala
				155					160					165
Leu	Thr	Gly	His	Val	Gln	Arg	Gln	Arg	Arg	Glu	Met	Val	Ala	Gln
				170					175					180
Gln	His	Arg	Leu	Arg	Gln	Ile	Gln	Glu	Arg	Leu	His	Thr	Ala	Ala

Leu Pro Ala

<210> 402

<211> 1915

<212> DNA

<213> Homo sapiens

<400> 402

```

ggcaacatgg ctcagcaggc ttgccccaga gccatggcaa agaatggact 50
tgtaatttgc atcctgggtga tcaccttact cctggaccag accaccagcc 100
acacatccag attaaaagcc aggaagcaca gcaaacgtcg agtgagagac 150
aaggatggag atctgaagac tcaaattgaa aagctctgga cagaagtcaa 200
tgccttgaag gaaattcaag ccctgcagac agtctgtctc cgaggcacta 250
aagttcacia gaaatgctac cttgcttcag aaggtttgaa gcatttccat 300
gaggccaatg aagactgcat ttccaaagga ggaatcctgg ttatccccag 350
gaactccgac gaaatcaacg ccctccaaga ctatggtaaa aggagcctgc 400
caggtgtcaa tgacttttgg ctgggcatca atgacatggt cacggaaggc 450
aagtttggtg acgtcaacgg aatogctatc tccttcctca actgggaccg 500
tgcacagcct aacggtggca agcgagaaaa ctgtgtcctg ttctcccaat 550
cagctcaggg caagtggagt gatgaggcct gtcgcagcag caagagatac 600
atatgcgagt tcaccatccc taaataggtc tttctccaat gtgtcctcca 650
agcaagattc atcataactt ataggttcat gatctctaag atcaagtaaa 700
aatcataatt tttacttatt aaaaaattgc aacacaagat caatgtccat 750
agcaatatga tagcatcagc caattttgct aacacatttc tttgggattt 800
tgcccttctt ggggtatagg ggatcagaaa tattgatcca tgtgcacgca 850
gataaaatgg cttctgctaa acagactaaa atctttctct ctagtctttc 900
tcaattgtac aaaccagtt tgttttcaaa aaatcacagt agcaatgcaa 950
ctcatcactc tagaaaagca agcttaggct acctgaaaga tttcccttg 1000
gaagtttagc gtatgtttga ctaacaaaaa ttccctacat cagagactct 1050
aggtgctata taatccaaaa acttttcagc ctggtgctca ttctgtcca 1100
tgctggcaat aataccttgt cagccatta cccttatttt gaattgctcc 1150
atctcctggt gggacttgta tcttgtctgc catatcagaa cacaaacccc 1200
tgaagagggt ctgatttgat tttttttttt tcttcatgcc tacccttttt 1250
ttggaagttt ccagocgcaa tttgaaatga aatgacaagg tgtatatattg 1300

```

atcaattttc attcccacca ttgcattaca acctctaact taaatgggta 1350
 accctaaggc atatcaaaga agcagattgc atgataaacg gaaatagaaa 1400
 aaaagaacct acattttattt tgcttttagca tccttactct caccttttat 1450
 gagattgaga gtggacttac atttcctttt ttacattttc gtatatattat 1500
 ttttttttagc catcattata tgtttaagtc tattatgggc aaccaatctt 1550
 tggaagctga aaactgaatt taaagaatgc tatcttggaa aattgcatac 1600
 gtctgtgcaa ttttttattc tgcctagtagc tattctgctt gtttaactag 1650
 attgtacaaa ataacttcat tgcttaatat caaattacaa agtttagact 1700
 tggagggaaa tgggcttttt agaagcaaac aattttaaat atattttgtt 1750
 cttcaaataa atagtgttta aacattgaat gtgttttgtg aacaatatcc 1800
 cactttgcaa actttaacta cacatgcttg gaattaagtt ttagctgttt 1850
 tcattgctca ataataaagc ctgaattctg atcaataaaa aaaaaaaaaa 1900
 aaaaaaaaaa aaaaaa 1915

<210> 403

<211> 206

<212> PRT

<213> Homo sapiens

<400> 403

Met	Ala	Gln	Gln	Ala	Cys	Pro	Arg	Ala	Met	Ala	Lys	Asn	Gly	Leu
1				5					10					15
Val	Ile	Cys	Ile	Leu	Val	Ile	Thr	Leu	Leu	Leu	Asp	Gln	Thr	Thr
				20					25					30
Ser	His	Thr	Ser	Arg	Leu	Lys	Ala	Arg	Lys	His	Ser	Lys	Arg	Arg
				35					40					45
Val	Arg	Asp	Lys	Asp	Gly	Asp	Leu	Lys	Thr	Gln	Ile	Glu	Lys	Leu
				50					55					60
Trp	Thr	Glu	Val	Asn	Ala	Leu	Lys	Glu	Ile	Gln	Ala	Leu	Gln	Thr
				65					70					75
Val	Cys	Leu	Arg	Gly	Thr	Lys	Val	His	Lys	Lys	Cys	Tyr	Leu	Ala
				80					85					90
Ser	Glu	Gly	Leu	Lys	His	Phe	His	Glu	Ala	Asn	Glu	Asp	Cys	Ile
				95					100					105
Ser	Lys	Gly	Gly	Ile	Leu	Val	Ile	Pro	Arg	Asn	Ser	Asp	Glu	Ile
				110					115					120
Asn	Ala	Leu	Gln	Asp	Tyr	Gly	Lys	Arg	Ser	Leu	Pro	Gly	Val	Asn
				125					130					135
Asp	Phe	Trp	Leu	Gly	Ile	Asn	Asp	Met	Val	Thr	Glu	Gly	Lys	Phe
				140					145					150
Val	Asp	Val	Asn	Gly	Ile	Ala	Ile	Ser	Phe	Leu	Asn	Trp	Asp	Arg

	155		160		165
Ala Gln Pro Asn Gly Gly Lys Arg Glu Asn Cys Val Leu Phe Ser					
	170		175		180
Gln Ser Ala Gln Gly Lys Trp Ser Asp Glu Ala Cys Arg Ser Ser					
	185		190		195
Lys Arg Tyr Ile Cys Glu Phe Thr Ile Pro Lys					
	200		205		

<210> 404
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 404
 cctggttatc cccaggaact ccgac 25

<210> 405
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 405
 ctcttgctgc tgcgacaggc ctc 23

<210> 406
 <211> 46
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 406
 gccctccaa gactatggta aaaggagcct gccagggtgc aatgac 46

<210> 407
 <211> 570
 <212> DNA
 <213> Homo sapiens

<400> 407
 gcgaggaccg ggtataagaa gcctcgtggc cttgcccggg cagccgcagg 50
 ttccccgcgc gccccgagcc cccgcgccat gaagctcgcc gccctcctgg 100
 ggctctgcgt ggccctgtcc tgcagctccg ctgctgcttt cttagtgggc 150
 tcggccaagc ctgtggccca gcctgtcgtc gcgctggagt cggcggcgga 200
 ggccggggcc gggaccctgg ccaacccctc cggcaccctc aaccgcgtga 250
 agtccttgct gagcagcctg ggcacccccg tgaaccacct catagagggc 300
 tcccagaagt gtgtggctga gctgggtccc caggccgtgg gggccgtgaa 350

ggccctgaag gccctgctgg gggccctgac agtgtttggc tgagccgaga 400
 ctggagcatc tacacctgag gacaagacgc tgcccacccg cgaggggtga 450
 aaaccccgcc gcggggagga ccgtccatcc ccttcccccg gcccctctca 500
 ataaacgtgg ttaagagcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 550
 aaaaaaaaaa aaaaaaaaaa 570

<210> 408

<211> 104

<212> PRT

<213> Homo sapiens

<400> 408

Met	Lys	Leu	Ala	Ala	Leu	Leu	Gly	Leu	Cys	Val	Ala	Leu	Ser	Cys	
1				5					10					15	
Ser	Ser	Ala	Ala	Ala	Phe	Leu	Val	Gly	Ser	Ala	Lys	Pro	Val	Ala	
				20					25					30	
Gln	Pro	Val	Ala	Ala	Leu	Glu	Ser	Ala	Ala	Glu	Ala	Gly	Ala	Gly	
				35					40					45	
Thr	Leu	Ala	Asn	Pro	Leu	Gly	Thr	Leu	Asn	Pro	Leu	Lys	Leu	Leu	
				50					55					60	
Leu	Ser	Ser	Leu	Gly	Ile	Pro	Val	Asn	His	Leu	Ile	Glu	Gly	Ser	
				65					70					75	
Gln	Lys	Cys	Val	Ala	Glu	Leu	Gly	Pro	Gln	Ala	Val	Gly	Ala	Val	
				80					85					90	
Lys	Ala	Leu	Lys	Ala	Leu	Leu	Gly	Ala	Leu	Thr	Val	Phe	Gly		
				95					100						

<210> 409

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 409

tgaaggactt ttccaggacc caaggccaca cactggaagt cttgcagctg 50
 aaggaggga ctccttgccc tccgcagccg atcacatgaa ggtggtgcca 100
 agtctcctgc tctccgtcct cctggcacag gtgtggctgg taccggcctt 150
 ggccccagc cctcagtcgc cagagacccc agccccctcag aaccagacca 200
 gcagggtagt gcaggctccc agggaggaag aggaagatga gcaggaggcc 250
 agcgaggaga aggccggtga ggaagagaaa gcctggctga tggccagcag 300
 gcagcagctt gccaaggaga cttcaaactt cggattcagc ctgctgcgaa 350
 agatctccat gaggcacgat ggcaacatgg tcttctctcc atttggcatg 400
 tccttgcca tgacaggctt gatgctgggg gccacagggc cgactgaaac 450
 ccagatcaag agagggtcc acttgcaggc cctgaagccc accaagccc 500

<210> 410
 <211> 444
 <212> PRT
 <213> Homo sapiens

<400> 410

Met	Lys	Val	Val	Pro	Ser	Leu	Leu	Leu	Ser	Val	Leu	Leu	Ala	Gln
1				5					10					15
Val	Trp	Leu	Val	Pro	Gly	Leu	Ala	Pro	Ser	Pro	Gln	Ser	Pro	Glu
				20					25					30
Thr	Pro	Ala	Pro	Gln	Asn	Gln	Thr	Ser	Arg	Val	Val	Gln	Ala	Pro
				35					40					45
Arg	Glu	Glu	Glu	Glu	Asp	Glu	Gln	Glu	Ala	Ser	Glu	Glu	Lys	Ala
				50					55					60
Gly	Glu	Glu	Glu	Lys	Ala	Trp	Leu	Met	Ala	Ser	Arg	Gln	Gln	Leu
				65					70					75
Ala	Lys	Glu	Thr	Ser	Asn	Phe	Gly	Phe	Ser	Leu	Leu	Arg	Lys	Ile
				80					85					90
Ser	Met	Arg	His	Asp	Gly	Asn	Met	Val	Phe	Ser	Pro	Phe	Gly	Met
				95					100					105
Ser	Leu	Ala	Met	Thr	Gly	Leu	Met	Leu	Gly	Ala	Thr	Gly	Pro	Thr
				110					115					120
Glu	Thr	Gln	Ile	Lys	Arg	Gly	Leu	His	Leu	Gln	Ala	Leu	Lys	Pro
				125					130					135
Thr	Lys	Pro	Gly	Leu	Leu	Pro	Ser	Leu	Phe	Lys	Gly	Leu	Arg	Glu
				140					145					150
Thr	Leu	Ser	Arg	Asn	Leu	Glu	Leu	Gly	Leu	Ser	Gln	Gly	Ser	Phe
				155					160					165
Ala	Phe	Ile	His	Lys	Asp	Phe	Asp	Val	Lys	Glu	Thr	Phe	Phe	Asn
				170					175					180
Leu	Ser	Lys	Arg	Tyr	Phe	Asp	Thr	Glu	Cys	Val	Pro	Met	Asn	Phe
				185					190					195
Arg	Asn	Ala	Ser	Gln	Ala	Lys	Arg	Leu	Met	Asn	His	Tyr	Ile	Asn
				200					205					210
Lys	Glu	Thr	Arg	Gly	Lys	Ile	Pro	Lys	Leu	Phe	Asp	Glu	Ile	Asn
				215					220					225
Pro	Glu	Thr	Lys	Leu	Ile	Leu	Val	Asp	Tyr	Ile	Leu	Phe	Lys	Gly
				230					235					240
Lys	Trp	Leu	Thr	Pro	Phe	Asp	Pro	Val	Phe	Thr	Glu	Val	Asp	Thr
				245					250					255
Phe	His	Leu	Asp	Lys	Tyr	Lys	Thr	Ile	Lys	Val	Pro	Met	Met	Tyr
				260					265					270
Gly	Ala	Gly	Lys	Phe	Ala	Ser	Thr	Phe	Asp	Lys	Asn	Phe	Arg	Cys
				275					280					285

His	Val	Leu	Lys	Leu	Pro	Tyr	Gln	Gly	Asn	Ala	Thr	Met	Leu	Val	
				290					295					300	
Val	Leu	Met	Glu	Lys	Met	Gly	Asp	His	Leu	Ala	Leu	Glu	Asp	Tyr	
				305					310					315	
Leu	Thr	Thr	Asp	Leu	Val	Glu	Thr	Trp	Leu	Arg	Asn	Met	Lys	Thr	
				320					325					330	
Arg	Asn	Met	Glu	Val	Phe	Phe	Pro	Lys	Phe	Lys	Leu	Asp	Gln	Lys	
				335					340					345	
Tyr	Glu	Met	His	Glu	Leu	Leu	Arg	Gln	Met	Gly	Ile	Arg	Arg	Ile	
				350					355					360	
Phe	Ser	Pro	Phe	Ala	Asp	Leu	Ser	Glu	Leu	Ser	Ala	Thr	Gly	Arg	
				365					370					375	
Asn	Leu	Gln	Val	Ser	Arg	Val	Leu	Arg	Arg	Thr	Val	Ile	Glu	Val	
				380					385					390	
Asp	Glu	Arg	Gly	Thr	Glu	Ala	Val	Ala	Gly	Ile	Leu	Ser	Glu	Ile	
				395					400					405	
Thr	Ala	Tyr	Ser	Met	Pro	Pro	Val	Ile	Lys	Val	Asp	Arg	Pro	Phe	
				410					415					420	
His	Phe	Met	Ile	Tyr	Glu	Glu	Thr	Ser	Gly	Met	Leu	Leu	Phe	Leu	
				425					430					435	
Gly	Arg	Val	Val	Asn	Pro	Thr	Leu	Leu							
				440											

<210> 411

<211> 636

<212> DNA

<213> Homo sapiens

<400> 411

```

ctgggatcag ccaactgcagc tccctgagca ctctctacag agacgcggac 50
cccagacatg aggaggctcc tcctggtcac cagcctggtg gttgtgctgc 100
tgtgggaggc aggtgcagtc ccagcaccca aggtccctat caagatgcaa 150
gtcaaacact ggccctcaga gcaggaccca gagaaggcct ggggcgccc 200
tgtggtggag cctccggaga aggacgacca gctggtggtg ctgttccctg 250
tccagaagcc gaaactcttg accaccgagg agaagccacg aggtcagggc 300
aggggccccca tccttccagg caccaaggcc tggatggaga ccgaggacac 350
cctggggccgt gtcttgagtc ccgagccoga ccatgacagc ctgtaccacc 400
ctccgcctga ggaggaccag ggcgaggaga ggccccggtt gtgggtgatg 450
ccaaatcacc aggtgctcct gggaccggag gaagaccaag accacatcta 500
ccacccccag tagggtcca ggggccatca ctgccccgc cctgtcccaa 550
ggcccaggct gttgggactg ggaccctccc taccctgccc cagctagaca 600

```


aataaacccc agcaggcaaa aaaaaaaaaa aaaaaa 636

<210> 412

<211> 151

<212> PRT

<213> Homo sapiens

<400> 412

Met Arg Arg Leu Leu Leu Val Thr Ser Leu Val Val Val Leu Leu
1 5 10 15

Trp Glu Ala Gly Ala Val Pro Ala Pro Lys Val Pro Ile Lys Met
20 25 30

Gln Val Lys His Trp Pro Ser Glu Gln Asp Pro Glu Lys Ala Trp
35 40 45

Gly Ala Arg Val Val Glu Pro Pro Glu Lys Asp Asp Gln Leu Val
50 55 60

Val Leu Phe Pro Val Gln Lys Pro Lys Leu Leu Thr Thr Glu Glu
65 70 75

Lys Pro Arg Gly Gln Gly Arg Gly Pro Ile Leu Pro Gly Thr Lys
80 85 90

Ala Trp Met Glu Thr Glu Asp Thr Leu Gly Arg Val Leu Ser Pro
95 100 105

Glu Pro Asp His Asp Ser Leu Tyr His Pro Pro Pro Glu Glu Asp
110 115 120

Gln Gly Glu Glu Arg Pro Arg Leu Trp Val Met Pro Asn His Gln
125 130 135

Val Leu Leu Gly Pro Glu Glu Asp Gln Asp His Ile Tyr His Pro
140 145 150

Gln

<210> 413

<211> 1176

<212> DNA

<213> Homo sapiens

<400> 413

agaaagctgc actctgttga gctccagggc gcagtggagg gagggagtga 50

aggagctctc tgtacccaag gaaagtgcag ctgagactca gacaagatta 100

caatgaacca actcagcttc ctgctgtttc tcatagcgac caccagagga 150

tggagtacag atgaggctaa tacttaacttc aaggaatgga cctgttcttc 200

gtctccatct ctgcccagaa gctgcaagga aatcaaagac gaatgtccta 250

gtgcatttga tggcctgtat tttctcgcga ctgagaatgg tggtatctac 300

cagaccttct gtgacatgac ctctgggggt ggcggtgga ccctggtggc 350

cagcgtgcat gagaatgaca tgcgtgggaa gtgcacggtg ggcatcgct 400

ggtccagtca gcagggcagc aaagcagact acccagaggg ggacggcaac 450
 tgggccaaact acaacacctt tggatctgca gaggcggcca cgagcgatga 500
 ctacaagaac cctggctact acgacatcca ggccaaggac ctgggcatct 550
 ggacagtgcc caataagtcc cccatgcagc actggagaaa cagctccctg 600
 ctgaggtacc gcacggacac tggcttcctc cagacactgg gacataatct 650
 gtttggcatc taccagaaat atccagtga atattggagaa ggaaagtgtt 700
 ggactgacaa cgccccgtg atccctgtgg tctatgattt tggcgacgcc 750
 cagaaaacag catcttatta ctaccctat ggccagcggg aattcactgc 800
 gggatttgtt cagttcaggg tatttaataa cgagagagca gccaacgcct 850
 tgtgtgctgg aatgagggc accggatgta aactgagca tcaactgcatt 900
 ggtggaggag gatactttcc agaggccagt cccagcagt gtggagattt 950
 ttctggtttt gattggagtg gatatggaac tcatgttggg tacagcagca 1000
 gccgtgagat aactgaggca gctgtgcttc tattctatcg ttgagagttt 1050
 tgtgggaggg aaccagacc tctctoccca accatgagat cccaaggatg 1100
 gagaacaact taccagtag ctagaatgtt aatggcagaa gagaaaacaa 1150
 taaatcatat tgactcaaga aaaaaa 1176

<210> 414

<211> 313

<212> PRT

<213> Homo sapiens

<400> 414

Met	Asn	Gln	Leu	Ser	Phe	Leu	Leu	Phe	Leu	Ile	Ala	Thr	Thr	Arg
1				5					10					15
Gly	Trp	Ser	Thr	Asp	Glu	Ala	Asn	Thr	Tyr	Phe	Lys	Glu	Trp	Thr
				20					25					30
Cys	Ser	Ser	Ser	Pro	Ser	Leu	Pro	Arg	Ser	Cys	Lys	Glu	Ile	Lys
				35					40					45
Asp	Glu	Cys	Pro	Ser	Ala	Phe	Asp	Gly	Leu	Tyr	Phe	Leu	Arg	Thr
				50					55					60
Glu	Asn	Gly	Val	Ile	Tyr	Gln	Thr	Phe	Cys	Asp	Met	Thr	Ser	Gly
				65					70					75
Gly	Gly	Gly	Trp	Thr	Leu	Val	Ala	Ser	Val	His	Glu	Asn	Asp	Met
				80					85					90
Arg	Gly	Lys	Cys	Thr	Val	Gly	Asp	Arg	Trp	Ser	Ser	Gln	Gln	Gly
				95					100					105
Ser	Lys	Ala	Asp	Tyr	Pro	Glu	Gly	Asp	Gly	Asn	Trp	Ala	Asn	Tyr
				110					115					120
Asn	Thr	Phe	Gly	Ser	Ala	Glu	Ala	Ala	Thr	Ser	Asp	Asp	Tyr	Lys

ccacaatagt tcagtgacat ctgctgcttc atcagtaaca atcacaacaa 550
 ctatgcattc tgaagcaaag aaaggatcaa aatttgatac tgggagcttt 600
 gttggtggta ttgtattaac gctgggagtt ttatctattc tttacattgg 650
 atgcaaaatg tattactcaa gaagaggcat tcggtatcga accatagatg 700
 aacatgatgc catcatttaa ggaaatccat ggaccaagga tggaatacag 750
 attgatgctg ccctatcaat taattttggt ttattaatag tttaaaacaa 800
 tattctcttt ttgaaaatag tataaacagg ccatgcatat aatgtacagt 850
 gtattacgta aatatgtaaa gattcttcaa ggtaacaagg gtttgggttt 900
 tgaaataaac atctggatct tatagaccgt tcatacaatg gttttagcaa 950
 gttcatagta agacaaacaa gtcctatctt ttttttttgg ctgggggtggg 1000
 ggcatgggtc acatatgacc agtaattgaa agacgtcatc actgaaagac 1050
 agaatgccat ctgggcatac aaataagaag tttgtcacag cactcaggat 1100
 tttgggtatc tttttagct cacataaaga acttcagtgc ttttcagagc 1150
 tggatatatc ttaattacta atgccacaca gaaattatac aatcaaacta 1200
 gatctgaagc ataatttaag aaaaacatca acattttttg tgctttaaac 1250
 tgtagtagtt ggtctagaaa caaaatactc c 1281

<210> 416

<211> 208

<212> PRT

<213> Homo sapiens

<400> 416

Met	Gly	Leu	Gly	Ala	Arg	Gly	Ala	Trp	Ala	Ala	Leu	Leu	Leu	Gly
1				5				10						15
Thr	Leu	Gln	Val	Leu	Ala	Leu	Leu	Gly	Ala	Ala	His	Glu	Ser	Ala
				20				25						30
Ala	Met	Ala	Ala	Ser	Ala	Asn	Ile	Glu	Asn	Ser	Gly	Leu	Pro	His
				35				40						45
Asn	Ser	Ser	Ala	Asn	Ser	Thr	Glu	Thr	Leu	Gln	His	Val	Pro	Ser
				50				55						60
Asp	His	Thr	Asn	Glu	Thr	Ser	Asn	Ser	Thr	Val	Lys	Pro	Pro	Thr
				65				70						75
Ser	Val	Ala	Ser	Asp	Ser	Ser	Asn	Thr	Thr	Val	Thr	Thr	Met	Lys
				80				85						90
Pro	Thr	Ala	Ala	Ser	Asn	Thr	Thr	Thr	Pro	Gly	Met	Val	Ser	Thr
				95				100						105
Asn	Met	Thr	Ser	Thr	Thr	Leu	Lys	Ser	Thr	Pro	Lys	Thr	Thr	Ser
				110				115						120
Val	Ser	Gln	Asn	Thr	Ser	Gln	Ile	Ser	Thr	Ser	Thr	Met	Thr	Val

	125		130		135
Thr His Asn Ser	Ser Val Thr Ser Ala	Ala Ser Ser Val Thr	Ile		
	140	145	150		
Thr Thr Thr Met	His Ser Glu Ala Lys	Lys Gly Ser Lys Phe	Asp		
	155	160	165		
Thr Gly Ser Phe	Val Gly Gly Ile Val	Leu Thr Leu Gly Val	Leu		
	170	175	180		
Ser Ile Leu Tyr	Ile Gly Cys Lys Met	Tyr Tyr Ser Arg Arg	Gly		
	185	190	195		
Ile Arg Tyr Arg	Thr Ile Asp Glu His	Asp Ala Ile Ile			
	200	205			

<210> 417

<211> 1728

<212> DNA

<213> Homo sapiens

<400> 417

```

cagccgggtc ccaagcctgt gcctgagcct gagcctgagc ctgagcccga 50
gccgggagcc ggtcgcgggg gctccgggct gtgggaccgc tgggccccca 100
gcgatggcga ccctgtgggg aggccttctt cggcttggtt ccttgctcag 150
cctgtcgtgc ctggcgcttt ccgtgctgct gctggcgagc ctgtcagacg 200
ccgccaagaa tttcgaggat gtcagatgta aatgtatctg ccctccctat 250
aaagaaaatt ctgggcataa ttataataag aacatatctc agaaagattg 300
tgattgcctt catgttggtg agcccatgcc tgtgcggggg cctgatgtag 350
aagcatactg tctacgctgt gaatgcaa atgaagaaag aagctctgtc 400
acaatcaagg ttaccattat aatttatctc tccatttttg gccttctact 450
tctgtacatg gtatatctta ctctggttga gcccatactg aagaggcgcc 500
tctttggaca tgcacagttg atacagagtg atgatgatat tggggatcac 550
cagccttttg caaatgcaca cgatgtgcta gcccgctccc gcagtcgagc 600
caacgtgctg aacaaggtag aatatgcaca gcagcgctgg aagcttcaag 650
tccaagagca gcgaaagtct gtctttgacc ggcatgttgt cctcagctaa 700
ttgggaattg aattcaaggt gactagaaag aaacaggcag acaactggaa 750
agaactgact gggttttgct gggtttcatt ttaatacctt gttgatttca 800
ccaactgttg ctggaagatt caaaactgga agcaaaaact tgcttgattt 850
ttttttcttg ttaacgtaat aatagagaca tttttaaaag cacacagctc 900
aaagtcagcc aataagtctt ttctattttg tgacttttac taataaaaat 950
aaatctgcct gttaaattatc ttgaagtcct ttacctggaa caagcactct 1000

```

ctttttcacc acatagtttt aacttgactt tcaagataat tttcaggggt 1050
 tttgttgttg ttgttttttg tttgtttgtt ttggtgggag aggggagggg 1100
 tgcctgggaa gtgggtaaca acttttttca agtcacttta ctaaacaaac 1150
 ttttgtaaag agaccttacc ttctattttc gagtttcatt tatattttgc 1200
 agtgtagcca gcctcatcaa agagctgact tactcatttg acttttgcac 1250
 tgactgtatt atctgggtat ctgctgtgtc tgcacttcat ggtaaacggg 1300
 atctaaaatg cctgggtggc tttcacaaaa agcagatttt cttcatgtac 1350
 tgtgatgtct gatgcaatgc atoctagaac aaactggcca ttgctagtt 1400
 tactctaaag actaaacata gtcttgggtg gtgtgggtctt actcatcttc 1450
 tagtaccttt aaggacaaat cctaaggact tggacacttg caataaagaa 1500
 attttatttt aaacccaagc ctccctggat tgataatata tacacatttg 1550
 tcagcatttc cggctgtggt gagaggcagc tgtttgagct ccaatatgtg 1600
 cagctttgaa ctagggctgg ggttgtgggt gcctcttctg aaaggtctaa 1650
 ccattattgg ataactggct tttttcttcc tatgtcctct ttggaatgta 1700
 acaataaaaa taatttttga aacatcaa 1728

<210> 418

<211> 198

<212> PRT

<213> Homo sapiens

<400> 418

Met	Ala	Thr	Leu	Trp	Gly	Gly	Leu	Leu	Arg	Leu	Gly	Ser	Leu	Leu
1				5					10					15
Ser	Leu	Ser	Cys	Leu	Ala	Leu	Ser	Val	Leu	Leu	Leu	Ala	Gln	Leu
				20					25					30
Ser	Asp	Ala	Ala	Lys	Asn	Phe	Glu	Asp	Val	Arg	Cys	Lys	Cys	Ile
				35					40					45
Cys	Pro	Pro	Tyr	Lys	Glu	Asn	Ser	Gly	His	Ile	Tyr	Asn	Lys	Asn
				50					55					60
Ile	Ser	Gln	Lys	Asp	Cys	Asp	Cys	Leu	His	Val	Val	Glu	Pro	Met
				65					70					75
Pro	Val	Arg	Gly	Pro	Asp	Val	Glu	Ala	Tyr	Cys	Leu	Arg	Cys	Glu
				80					85					90
Cys	Lys	Tyr	Glu	Glu	Arg	Ser	Ser	Val	Thr	Ile	Lys	Val	Thr	Ile
				95					100					105
Ile	Ile	Tyr	Leu	Ser	Ile	Leu	Gly	Leu	Leu	Leu	Leu	Tyr	Met	Val
				110					115					120
Tyr	Leu	Thr	Leu	Val	Glu	Pro	Ile	Leu	Lys	Arg	Arg	Leu	Phe	Gly
				125					130					135

His Ala Gln Leu Ile Gln Ser Asp Asp Asp Ile Gly Asp His Gln
140 145 150

Pro Phe Ala Asn Ala His Asp Val Leu Ala Arg Ser Arg Ser Arg
155 160 165

Ala Asn Val Leu Asn Lys Val Glu Tyr Ala Gln Gln Arg Trp Lys
170 175 180

Leu Gln Val Gln Glu Gln Arg Lys Ser Val Phe Asp Arg His Val
185 190 195

Val Leu Ser

<210> 419
<211> 681
<212> DNA
<213> Homo sapiens

<400> 419
gcacctgcga ccaccgtgag cagtcattggc gtactccaca gtgcagagag 50
tcgctctggc ttctgggctt gtcctggctc tgtoctgct gctgccaag 100
gccttcctgt cccgcgggaa gcggcaggag ccgccgccga cacctgaagg 150
aaaattgggc cgatttccac ctatgatgca tcatcaccag gcaccctcag 200
atggccagac tcctggggct cgtttccaga ggtctcacct tgccgaggca 250
tttgcaaagg ccaaaggatc aggtggagggt gctggaggag gaggtagtgg 300
aagagggtctg atggggcaga ttattccaat ctacggtttt gggatttttt 350
tatatatact gtacattcta tttaaggtaa gtagaatcat cctaatacata 400
ttacatcaat gaaaatctaa tatggcgata aaaatcattg tctacattaa 450
aacttcttat agttcataaa attatttcaa atccatcatc tctttaaatc 500
ctgcctcctc ttcattgaggt acttaggata gccattattt cagtttcaca 550
taagaatgtt tactcaatgt ttaagtgttt tgccccaaaa ttcacaacta 600
acaaggcaga actaggactt gaacatggat cttttgggtc ttaatccagt 650
gagtgatata attcaatgca ctccctgcc a 681

<210> 420
<211> 128
<212> PRT
<213> Homo sapiens

<400> 420
Met Ala Tyr Ser Thr Val Gln Arg Val Ala Leu Ala Ser Gly Leu
1 5 10 15

Val Leu Ala Leu Ser Leu Leu Leu Pro Lys Ala Phe Leu Ser Arg
20 25 30

Gly Lys Arg Gln Glu Pro Pro Pro Thr Pro Glu Gly Lys Leu Gly
35 40 45

Arg	Phe	Pro	Pro	Met	Met	His	His	His	Gln	Ala	Pro	Ser	Asp	Gly
				50					55					60
Gln	Thr	Pro	Gly	Ala	Arg	Phe	Gln	Arg	Ser	His	Leu	Ala	Glu	Ala
			65						70					75
Phe	Ala	Lys	Ala	Lys	Gly	Ser	Gly	Gly	Gly	Ala	Gly	Gly	Gly	Gly
			80						85					90
Ser	Gly	Arg	Gly	Leu	Met	Gly	Gln	Ile	Ile	Pro	Ile	Tyr	Gly	Phe
			95						100					105
Gly	Ile	Phe	Leu	Tyr	Ile	Leu	Tyr	Ile	Leu	Phe	Lys	Val	Ser	Arg
			110						115					120
Ile	Ile	Leu	Ile	Ile	Leu	His	Gln							
			125											

<210> 421

<211> 1630

<212> DNA

<213> Homo sapiens

<400> 421

```

cggtctcgagt gcagctgtgg ggagatttca gtgcattgcc tcccctgggt 50
gctcttcctc ttggatttga aagttgagag cagcatgttt tgcccactga 100
aactcctcct gctgccagtg ttactggatt attccttggg cctgaatgac 150
ttgaatgttt ccccgccctga gctaacagtc catgtgggtg attcagctct 200
gatgggatgt gttttccaga gcacagaaga caaatgtata ttcaagatag 250
actggactct gtcaccagga gagcacgcca aggacgaata tgtgctatac 300
tattactcca atctcagtgt gcctattggg cgcttccaga accgcgtaca 350
cttgatgggg gacatottat gcaatgatgg ctctctcctg ctccaagatg 400
tgcaagaggc tgaccaggga acctatatct gtgaaatccg cctcaaaggg 450
gagagccagg tgttcaagaa ggcggtggta ctgcatgtgc ttccagagga 500
gccc aaagag ctcatggtcc atgtgggtgg attgattcag atgggatgtg 550
ttttccagag cacagaagtg aaacacgtga ccaaggtaga atggatattt 600
tcaggacggc ggcgaaagga ggagattgta tttcgttact accacaaact 650
caggatgtct gtggagtact ccagagctg gggccacttc cagaatcgtg 700
tgaacctggt gggggacatt ttccgcaatg acggttccat catgcttcaa 750
ggagtgaggg agtcagatgg aggaaactac acctgcagta tccacctagg 800
gaacctggtg ttcaagaaaa ccattgtgct gcatgtcagc ccggaagagc 850
ctcgaacact ggtgaccccg gcagccctga ggcctctggt cttgggtggt 900
aatcagttgg tgatcattgt gggaattgtc tgtgccacaa tcctgctgct 950
ccctgtttctg atattgatcg tgaagaagac ctgtggaaat aagagttcag 1000

```


tgaattctac agtcttgggtg aagaacacga agaagactaa tccagagata 1050
aaagaaaaac cctgccattt tgaaagatgt gaaggggaga aacacattta 1100
ctccccaata attgtacggg aggtgatcga ggaagaagaa ccaagtgaaa 1150
aatcagaggc cacctacatg accatgcacc cagtttggcc ttctctgagg 1200
tcagatcgga acaactcact tgaaaaaaag tcaggtgggg gaatgccaaa 1250
aacacagcaa gccttttgag aagaatggag agtcccttca tctcagcagc 1300
ggtggagact ctctcctgtg tgtgtcctgg gccactctac cagtgatttc 1350
agactccgc tctcccagct gtcctcctgt ctcatgttt ggtcaataca 1400
ctgaagatgg agaatttga gcctggcaga gagactggac agctctggag 1450
gaacaggcct gctgagggga ggggagcatg gacttggcct ctggagtggg 1500
aactggccc tgggaaccag gctgagctga gtggcctcaa acccccgtt 1550
ggatcagacc ctctgtggg caggttctt agtggatgag ttactgggaa 1600
gaatcagaga taaaaaccaa cccaaatcaa 1630

<210> 422

<211> 394

<212> PRT

<213> Homo sapiens

<400> 422

Met	Phe	Cys	Pro	Leu	Lys	Leu	Ile	Leu	Leu	Pro	Val	Leu	Leu	Asp	1	5	10	15
Tyr	Ser	Leu	Gly	Leu	Asn	Asp	Leu	Asn	Val	Ser	Pro	Pro	Glu	Leu	20	25	30	
Thr	Val	His	Val	Gly	Asp	Ser	Ala	Leu	Met	Gly	Cys	Val	Phe	Gln	35	40	45	
Ser	Thr	Glu	Asp	Lys	Cys	Ile	Phe	Lys	Ile	Asp	Trp	Thr	Leu	Ser	50	55	60	
Pro	Gly	Glu	His	Ala	Lys	Asp	Glu	Tyr	Val	Leu	Tyr	Tyr	Tyr	Ser	65	70	75	
Asn	Leu	Ser	Val	Pro	Ile	Gly	Arg	Phe	Gln	Asn	Arg	Val	His	Leu	80	85	90	
Met	Gly	Asp	Ile	Leu	Cys	Asn	Asp	Gly	Ser	Leu	Leu	Leu	Gln	Asp	95	100	105	
Val	Gln	Glu	Ala	Asp	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	110	115	120	
Lys	Gly	Glu	Ser	Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	125	130	135	
Leu	Pro	Glu	Glu	Pro	Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	140	145	150	
Ile	Gln	Met	Gly	Cys	Val	Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val				

	155	160	165
Thr Lys Val Glu	Trp 170	Ile Phe Ser Gly Arg 175	Arg Ala Lys Glu Glu 180
Ile Val Phe Arg	Tyr 185	Tyr His Lys Leu Arg 190	Met Ser Val Glu Tyr 195
Ser Gln Ser Trp	Gly 200	His Phe Gln Asn Arg 205	Val Asn Leu Val Gly 210
Asp Ile Phe Arg	Asn 215	Asp Gly Ser Ile Met 220	Leu Gln Gly Val Arg 225
Glu Ser Asp Gly	Gly 230	Asn Tyr Thr Cys Ser 235	Ile His Leu Gly Asn 240
Leu Val Phe Lys	Lys 245	Thr Ile Val Leu His 250	Val Ser Pro Glu Glu 255
Pro Arg Thr Leu	Val 260	Thr Pro Ala Ala Leu 265	Arg Pro Leu Val Leu 270
Gly Gly Asn Gln	Leu 275	Val Ile Ile Val Gly 280	Ile Val Cys Ala Thr 285
Ile Leu Leu Leu	Pro 290	Val Leu Ile Leu Ile 295	Val Lys Lys Thr Cys 300
Gly Asn Lys Ser	Ser 305	Val Asn Ser Thr Val 310	Leu Val Lys Asn Thr 315
Lys Lys Thr Asn	Pro 320	Glu Ile Lys Glu Lys 325	Pro Cys His Phe Glu 330
Arg Cys Glu Gly	Glu 335	Lys His Ile Tyr Ser 340	Pro Ile Ile Val Arg 345
Glu Val Ile Glu	Glu 350	Glu Glu Pro Ser Glu 355	Lys Ser Glu Ala Thr 360
Tyr Met Thr Met	His 365	Pro Val Trp Pro Ser 370	Leu Arg Ser Asp Arg 375
Asn Asn Ser Leu	Glu 380	Lys Lys Ser Gly Gly 385	Gly Met Pro Lys Thr 390

Gln Gln Ala Phe

<210> 423

<211> 963

<212> DNA

<213> Homo sapiens

<400> 423

ctatgaagaa gcttcctgga aaacaataag caaaggaaaa caaatgtgtc 50
ccatctcaca tggttctacc ctactaaaga caggaagatc ataaactgac 100
agatactgaa attgtaagag ttggaaacta cattttgcaa agtcattgaa 150
ctctgagctc agttgcagta ctcggaagc catgcaggat gaagatggat 200

acatcacctt aaatattaaa actcggaac cagctctcgt ctccgttggc 250
 cctgcatect cctcctgggtg gcgtgtgatg gctttgattc tgctgatcct 300
 gtgcgtgggg atggttgtcg ggctgggtggc tctggggatt tgggtctgtca 350
 tgcagcgcaa ttacctacaa gatgagaatg aaaatcgcac aggaactctg 400
 caacaattag caaagcgctt ctgtcaatat gtggtaaaac aatcagaact 450
 aaagggcact ttcaaagggtc ataaatgcag cccctgtgac acaaactgga 500
 gatattatgg agatagctgc tatgggttct tcaggcacia cttaatatgg 550
 gaagagagta agcagtactg cactgacatg aatgctactc tcctgaagat 600
 tgacaaccgg aacattgtgg agtacatcaa agccaggact catttaattc 650
 gttgggtcgg attatctcgc cagaagtcga atgaggtctg gaagtgggag 700
 gatggctcgg ttatctcaga aaatatgttt gagtttttgg aagatggaaa 750
 aggaaatatg aattgtgctt attttcataa tgggaaaatg caccctacct 800
 tctgtgagaa caaacattat ttaatgtgtg agaggaaggc tggcatgacc 850
 aaggtggacc aactacctta atgcaaagag gtggacagga taacacagat 900
 aagggtctta ttgtacaata aaagatatgt atgaatgcat cagtagctga 950
 aaaaaaaaaa aaa 963

<210> 424

<211> 229

<212> PRT

<213> Homo sapiens

<400> 424

Met	Gln	Asp	Glu	Asp	Gly	Tyr	Ile	Thr	Leu	Asn	Ile	Lys	Thr	Arg
1				5					10					15
Lys	Pro	Ala	Leu	Val	Ser	Val	Gly	Pro	Ala	Ser	Ser	Ser	Trp	Trp
				20					25					30
Arg	Val	Met	Ala	Leu	Ile	Leu	Leu	Ile	Leu	Cys	Val	Gly	Met	Val
				35					40					45
Val	Gly	Leu	Val	Ala	Leu	Gly	Ile	Trp	Ser	Val	Met	Gln	Arg	Asn
				50					55					60
Tyr	Leu	Gln	Asp	Glu	Asn	Glu	Asn	Arg	Thr	Gly	Thr	Leu	Gln	Gln
				65					70					75
Leu	Ala	Lys	Arg	Phe	Cys	Gln	Tyr	Val	Val	Lys	Gln	Ser	Glu	Leu
				80					85					90
Lys	Gly	Thr	Phe	Lys	Gly	His	Lys	Cys	Ser	Pro	Cys	Asp	Thr	Asn
				95					100					105
Trp	Arg	Tyr	Tyr	Gly	Asp	Ser	Cys	Tyr	Gly	Phe	Phe	Arg	His	Asn
				110					115					120
Leu	Thr	Trp	Glu	Glu	Ser	Lys	Gln	Tyr	Cys	Thr	Asp	Met	Asn	Ala

	125		130		135
Thr Leu Leu Lys	Ile Asp Asn Arg Asn	Ile Val Glu Tyr Ile	Lys		
	140		145		150
Ala Arg Thr His	Leu Ile Arg Trp Val	Gly Leu Ser Arg Gln	Lys		
	155		160		165
Ser Asn Glu Val	Trp Lys Trp Glu Asp	Gly Ser Val Ile Ser	Glu		
	170		175		180
Asn Met Phe Glu	Phe Leu Glu Asp Gly	Lys Gly Asn Met Asn	Cys		
	185		190		195
Ala Tyr Phe His	Asn Gly Lys Met His	Pro Thr Phe Cys Glu	Asn		
	200		205		210
Lys His Tyr Leu	Met Cys Glu Arg Lys	Ala Gly Met Thr Lys	Val		
	215		220		225

Asp Gln Leu Pro

<210> 425
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 425
 tgcagcccct gtgacacaaa ctgg 24

<210> 426
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 426
 ctgagataac cgagccatcc tcccac 26

<210> 427
 <211> 49
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 427
 gcttcctgac actaaggctg tctgctagtc agaattgcct caaaaagag 49

<210> 428
 <211> 21
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 428
 ccaccaatgg cagccccacc t 21

 <210> 429
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 429
 gactgccctc cctgcc 17

 <210> 430
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 430
 caaaaagcct ggaagtcttc aaag 24

 <210> 431
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 431
 cagctggact gcaggtgcta 20

 <210> 432
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 432
 cagtgagcac agcaagtgtc ct 22

 <210> 433
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 433
 ggccacctcc ttgagtcttc agttccct 28

 <210> 434
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 434
 caactactgg ctaaagctgg tgaa 24

 <210> 435
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 435
 cctttctgta taggtgatac ccaatga 27

 <210> 436
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 436
 tggccatccc taccagaggc aaaa 24

 <210> 437
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 437
 ctgaagacga cgcgattac ta 22

 <210> 438
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 438
 ggcagaaatg ggaggcaga 19

 <210> 439
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 439
 tgctctgttg gctacggctt tagtcocctag 30

 <210> 440
 <211> 22

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 440
 agcagcagcc atgtagaatg aa 22

 <210> 441
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 441
 aatacgaaca gtgcacgctg at 22

 <210> 442
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 442
 tccagagagc caagcacggc aga 23

 <210> 443
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 443
 tctagccagc ttggctccaa ta 22

 <210> 444
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 444
 cctggctcta gcaccaactc ata 23

 <210> 445
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 445
 tcagtggccc taaggagatg ggcct 25

<210> 446
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 446
caggatacag tgggaatctt gaga 24

<210> 447
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 447
cctgaagggc ttggagctta gt 22

<210> 448
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 448
tctttggcca tttcccatgg ctca 24

<210> 449
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 449
cccatggcga ggaggaat 18

<210> 450
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 450
tgcgtacgtg tgccttcag 19

<210> 451
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 451
 cagcacccca ggcagtctgt gtgt 24

 <210> 452
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 452
 aacgtgctac acgaccagtg tact 24

 <210> 453
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 453
 cacagcatat tcagatgact aaatcca 27

 <210> 454
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 454
 ttgttttagtt ctccaccgtg tctccacaga a 31

 <210> 455
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 455
 tgtcagaatg caacctggct t 21

 <210> 456
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 456
 tgatgtgcct ggctcagaac 20

 <210> 457
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 457
tgcacctaga tgtccccagc accc 24

<210> 458
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 458
aagatgcgcc aggcttctta 20

<210> 459
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 459
ctcctgtacg gtctgctcac ttat 24

<210> 460
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 460
tggctgtcag tccagtgtgc atgg 24

<210> 461
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 461
gcatagggat agataagatc ctgctttat 29

<210> 462
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 462
caaattaaag taccocatcag gagagaa 27

<210> 463
<211> 37

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 463
 aagttgctaa atatatacat tatctgcgcc aagtcca 37

 <210> 464
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 464
 gtgctgcca caattcatga 20

 <210> 465
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 465
 gtccttggtgta tgggtctgaa ttatat 26

 <210> 466
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 466
 actctctgca cccacagtc accactatct c 31

 <210> 467
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 467
 ctgaggaacc agccatgtct ct 22

 <210> 468
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 468
 gaccagatgc aggtacagga tga 23

<210> 469
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 469
 ctgccccttc agtgatgcca acctt 25

 <210> 470
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 470
 ggtggaggc tcaactgagta ga 22

 <210> 471
 <211> 28
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 471
 caatacaggt aatgaaactc tgcttctt 28

 <210> 472
 <211> 36
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 472
 tcctcttaag cataggccat tttctcagtt tagaca 36

 <210> 473
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 473
 ggtggtcttg cttggtctca c 21

 <210> 474
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

<400> 474
 ccgtcgttca gcaacatgac 20

 <210> 475
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 475
 accgcctacc gctgtgccca 20

 <210> 476
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 476
 cagtaaaacc acaggctgga ttt 23

 <210> 477
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 477
 cctgagagca agaaggttga gaat 24

 <210> 478
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 478
 tagacaggga ccatggcccg ca 22

 <210> 479
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 479
 tgggctgtag aagagttggtt g 21

 <210> 480
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

 <400> 480
 tccacacttg gccagtttat 20

 <210> 481
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 481
 cccaacttct cccttttgga ccct 24

 <210> 482
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 482
 gtcccttcac tgtttagagc atga 24

 <210> 483
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 483
 actctcccc tcaacagcct cctgag 26

 <210> 484
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 484
 gtggtcaggg cagatccttt 20

 <210> 485
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 485
 acagatccag gagagactcc aca 23

 <210> 486
 <211> 21

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 486
 agcggcgctc ccagcctgaa t 21

 <210> 487
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 487
 catgattggg cctcagttcc atc 23

 <210> 488
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 488
 atagaggggt cccagaagtg 20

 <210> 489
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 489
 cagggccttc agggccttca c 21

 <210> 490
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 490
 gctcagccaa acactgtca 19

 <210> 491
 <211> 17
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Synthetic oligonucleotide probe

 <400> 491
 ggggccctga cagtgtt 17

<210> 492
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 492
ctgagccgag actggagcat ctacac 26

<210> 493
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 493
gtgggcagcg tcttgctc 17

<210> 494
<211> 1231
<212> DNA
<213> Homo Sapien

<400> 494
cccacgcgtc cgcgcagtcg cgcagttctg cctccgcctg ccagtctcgc 50
ccgcgatccc ggcccggggc tgtggcgctg actccgaccc aggcagccag 100
cagcccgcgc gggagccgga ccgcccgcgg aggagctcgg acggcatgct 150
gagccccctc ctttgctgaa gcccgagtgc ggagaagccc gggcaaacgc 200
aggctaagga gaccaaagcg gcgaagtcgc gagacagcgg acaagcagcg 250
gaggagaagg agggaggaggc gaaccagag aggggcagca aaagaagcgg 300
tggtggtggg cgtcgtggcc atggcggcgg ctatcgccag ctcgctcatc 350
cgtcagaaga ggcaagcccg cgagcgcgag aaatccaacg cctgcaagtg 400
tgtcagcagc ccagcaaag gcaagaccag ctgcgacaaa aacaagttaa 450
atgtcttttc ccgggtcaaa ctcttcgggt ccaagaagag gcgcagaaga 500
agaccagagc ctacgcttaa gggatatagt accaagctat acagccgaca 550
aggctaccac ttgcagctgc aggcggatgg aaccattgat ggcaccaaag 600
atgaggacag cacttacact ctgtttaacc tcatccctgt gggctctgca 650
gtggtggcta tccaaggagt tcaaaccaag ctgtacttgg caatgaacag 700
tgagggatac ttgtacacct cggaactttt cacacctgag tgcaaattca 750
aagaatcagt gtttgaaaat tattatgtga catattcatc aatgatatac 800
cgtcagcagc agtcaggccg aggggtggtat ctgggtctga acaaagaagg 850
agagatcatg aaaggcaacc atgtgaagaa gaacaagcct gcagctcatt 900

ttctgcctaa accactgaaa gtggccatgt acaaggagcc atcactgcac 950
gatctcacgg agttctcccg atctggaagc gggaccccaa ccaagagcag 1000
aagtgtctct ggcgtgctga acggaggcaa atccatgagc cacaatgaat 1050
caacgtagcc agtgagggca aaagaagggc tctgtaacag aaccttacct 1100
ccagggtgctg ttgaattctt ctagcagtcc ttcacccaaa agttcaaatt 1150
tgtcagtgc atttaccaaa caaacaggca gagttcacta ttctatctgc 1200
cattagacct tcttatcatc cataactaaag c 1231

<210> 495

<211> 245

<212> PRT

<213> Homo Sapien

<400> 495

Met	Ala	Ala	Ala	Ile	Ala	Ser	Ser	Leu	Ile	Arg	Gln	Lys	Arg	Gln
1				5					10					15
Ala	Arg	Glu	Arg	Glu	Lys	Ser	Asn	Ala	Cys	Lys	Cys	Val	Ser	Ser
				20					25					30
Pro	Ser	Lys	Gly	Lys	Thr	Ser	Cys	Asp	Lys	Asn	Lys	Leu	Asn	Val
				35					40					45
Phe	Ser	Arg	Val	Lys	Leu	Phe	Gly	Ser	Lys	Lys	Arg	Arg	Arg	Arg
				50					55					60
Arg	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	Tyr	Ser
				65					70					75
Arg	Gln	Gly	Tyr	His	Leu	Gln	Leu	Gln	Ala	Asp	Gly	Thr	Ile	Asp
				80					85					90
Gly	Thr	Lys	Asp	Glu	Asp	Ser	Thr	Tyr	Thr	Leu	Phe	Asn	Leu	Ile
				95					100					105
Pro	Val	Gly	Leu	Arg	Val	Val	Ala	Ile	Gln	Gly	Val	Gln	Thr	Lys
				110					115					120
Leu	Tyr	Leu	Ala	Met	Asn	Ser	Glu	Gly	Tyr	Leu	Tyr	Thr	Ser	Glu
				125					130					135
Leu	Phe	Thr	Pro	Glu	Cys	Lys	Phe	Lys	Glu	Ser	Val	Phe	Glu	Asn
				140					145					150
Tyr	Tyr	Val	Thr	Tyr	Ser	Ser	Met	Ile	Tyr	Arg	Gln	Gln	Gln	Ser
				155					160					165
Gly	Arg	Gly	Trp	Tyr	Leu	Gly	Leu	Asn	Lys	Glu	Gly	Glu	Ile	Met
				170					175					180
Lys	Gly	Asn	His	Val	Lys	Lys	Asn	Lys	Pro	Ala	Ala	His	Phe	Leu
				185					190					195
Pro	Lys	Pro	Leu	Lys	Val	Ala	Met	Tyr	Lys	Glu	Pro	Ser	Leu	His
				200					205					210
Asp	Leu	Thr	Glu	Phe	Ser	Arg	Ser	Gly	Ser	Gly	Thr	Pro	Thr	Lys

	215	220	225
Ser Arg Ser Val	Ser Gly Val Leu Asn Gly Gly Lys Ser Met Ser		
	230	235	240
His Asn Glu Ser Thr			
	245		

<210> 496
 <211> 1471
 <212> DNA
 <213> Homo Sapien

<400> 496
 ccaggatgga gctggggcct gtatagccat attattgttc tatgctacta 50
 gacatggggg ggacttggtg aaaaaggtat tatccagcca gagggctctgg 100
 gagccctgtc ttactgaacc tgggcaacct ggatattctg agacatattt 150
 tgggggggatt tcagtgaaaa aagtggggga tcccctccat ttagagtgtg 200
 gcaaaggaaa aaacaccaag gttgggttcc ttcctgacat tggcagtgcc 250
 ccagtagggg tgggatgagc gaatattccc aaagctaaag tcccacaccc 300
 tgtagattac aagagtggat ttggcaggag tgtgccccaa aatacagtgg 350
 aaaggtgcct gaagatattt aaaccacgtc ttggaaattt agtgggtctt 400
 ggctttggga taggtgaagt gaggacagac actggagagg agggaaaggg 450
 gacgttttca ataggaggca aaactogagg gtgggatcca ctgaggagta 500
 cataggctgc tggatctggt ggagccagca ctgggcccac ggggtggtaac 550
 tggctgctgt ggaggggggt acgtgagggg ggggtctggg gcttatcctc 600
 aggtcctgtg ggtggggcag cgagtggggg cctgagcgtc aagagcatgc 650
 cctagtgagc gggctcctct gggggagccc agcgcgctcc gggcgccctgc 700
 cggtttgggg gtgtctcctc ccggggcgct atggcggcgc tggccagtag 750
 cctgatccgg cagaagcggg aggtccgcga gcccgggggc agccggccgg 800
 tgtcggcgca gcggcgctg tgtcccgcg gcaccaagtc cctttgccag 850
 aagcagctcc tcatcctgct gtccaagggt cgactgtgcg gggggcggcc 900
 cgcgcgggcg gaccgcggcc cggagcctca gctcaaaggc atcgtcacca 950
 aactgttctg ccgccagggt ttctacctcc aggcgaatcc cgacggaagc 1000
 atccagggca cccagagga taccagctcc ttcacccact tcaacctgat 1050
 ccctgtgggc ctccgtgtgg tcaccatcca gagcgccaag ctgggtcact 1100
 acatggccat gaatgctgag ggactgctct acagttcgcc gcatttcaca 1150
 gctgagtgtc gctttaagga gtgtgtcttt gagaattact acgtcctgta 1200
 cgcctctgct ctctaccgcc agcgtcgttc tggccggggc tggtaacctg 1250

gcctggacaa ggagggccag gtcatgaagg gaaaccgagt taagaagacc 1300
aaggcagctg cccactttct gcccaagctc ctggaggtgg ccatgtacca 1350
ggagccttct ctccacagtg tccccgaggc ctccccttcc agtccccctg 1400
ccccctgaaa tgtagtccct ggactggagg ttccctgcac tcccagtgag 1450
ccagccacca ccacaacctg t 1471

<210> 497

<211> 225

<212> PRT

<213> Homo Sapien

<400> 497

Met	Ala	Ala	Leu	Ala	Ser	Ser	Leu	Ile	Arg	Gln	Lys	Arg	Glu	Val	1	5	10	15
Arg	Glu	Pro	Gly	Gly	Ser	Arg	Pro	Val	Ser	Ala	Gln	Arg	Arg	Val	20	25	30	
Cys	Pro	Arg	Gly	Thr	Lys	Ser	Leu	Cys	Gln	Lys	Gln	Leu	Leu	Ile	35	40	45	
Leu	Leu	Ser	Lys	Val	Arg	Leu	Cys	Gly	Gly	Arg	Pro	Ala	Arg	Pro	50	55	60	
Asp	Arg	Gly	Pro	Glu	Pro	Gln	Leu	Lys	Gly	Ile	Val	Thr	Lys	Leu	65	70	75	
Phe	Cys	Arg	Gln	Gly	Phe	Tyr	Leu	Gln	Ala	Asn	Pro	Asp	Gly	Ser	80	85	90	
Ile	Gln	Gly	Thr	Pro	Glu	Asp	Thr	Ser	Ser	Phe	Thr	His	Phe	Asn	95	100	105	
Leu	Ile	Pro	Val	Gly	Leu	Arg	Val	Val	Thr	Ile	Gln	Ser	Ala	Lys	110	115	120	
Leu	Gly	His	Tyr	Met	Ala	Met	Asn	Ala	Glu	Gly	Leu	Leu	Tyr	Ser	125	130	135	
Ser	Pro	His	Phe	Thr	Ala	Glu	Cys	Arg	Phe	Lys	Glu	Cys	Val	Phe	140	145	150	
Glu	Asn	Tyr	Tyr	Val	Leu	Tyr	Ala	Ser	Ala	Leu	Tyr	Arg	Gln	Arg	155	160	165	
Arg	Ser	Gly	Arg	Ala	Trp	Tyr	Leu	Gly	Leu	Asp	Lys	Glu	Gly	Gln	170	175	180	
Val	Met	Lys	Gly	Asn	Arg	Val	Lys	Lys	Thr	Lys	Ala	Ala	Ala	His	185	190	195	
Phe	Leu	Pro	Lys	Leu	Leu	Glu	Val	Ala	Met	Tyr	Gln	Glu	Pro	Ser	200	205	210	
Leu	His	Ser	Val	Pro	Glu	Ala	Ser	Pro	Ser	Ser	Pro	Pro	Ala	Pro	215	220	225	

<210> 498

<211> 744

<212> DNA
<213> Homo Sapien

<400> 498
atggccgcgg ccatcgctag cggcttgatc cgccagaagc ggcaggcgcg 50
ggagcagcac tgggaccggc cgtctgccag caggaggcgg agcagcccca 100
gcaagaaccg cgggctctgc aacggcaacc tgggtgatat cttctccaaa 150
gtgcgcatct tcggcctcaa gaagcgcagg ttgcggcgcc aagatcccca 200
gctcaagggt atagtgacca gggttatattg caggcaaggc tactacttgc 250
aaatgcaccc cgatggagct ctogatggaa ccaaggatga cagcactaat 300
tctacactct tcaacctcat accagtggga ctacgtgttg ttgcatcca 350
gggagtgaac acagggttgt atatagccat gaatggagaa ggttacctct 400
acccatcaga actttttacc cctgaatgca agtttaaaga atctgttttt 450
gaaaattatt atgtaatcta ctcatccatg ttgtacagac aacaggaatc 500
tggtagagcc tggtttttgg gattaaataa ggaagggcaa gctatgaaag 550
ggaacagagt aaagaaaacc aaaccagcag ctcattttct acccaagcca 600
ttggaagttg ccatgtaccg agaaccatct ttgcatgatg ttggggaaac 650
ggtcccgaag cctggggtga cgccaagtaa aagcacaagt gcgtctgcaa 700
taatgaatgg aggcaaacca gtcaacaaga gtaagacaac atag 744

<210> 499
<211> 247
<212> PRT
<213> Homo Sapien

<400> 499
Met Ala Ala Ala Ile Ala Ser Gly Leu Ile Arg Gln Lys Arg Gln
1 5 10 15
Ala Arg Glu Gln His Trp Asp Arg Pro Ser Ala Ser Arg Arg Arg
20 25 30
Ser Ser Pro Ser Lys Asn Arg Gly Leu Cys Asn Gly Asn Leu Val
35 40 45
Asp Ile Phe Ser Lys Val Arg Ile Phe Gly Leu Lys Lys Arg Arg
50 55 60
Leu Arg Arg Gln Asp Pro Gln Leu Lys Gly Ile Val Thr Arg Leu
65 70 75
Tyr Cys Arg Gln Gly Tyr Tyr Leu Gln Met His Pro Asp Gly Ala
80 85 90
Leu Asp Gly Thr Lys Asp Asp Ser Thr Asn Ser Thr Leu Phe Asn
95 100 105
Leu Ile Pro Val Gly Leu Arg Val Val Ala Ile Gln Gly Val Lys
110 115 120

Thr Gly Leu Tyr	Ile Ala Met Asn Gly	Glu Gly Tyr Leu Tyr	Pro
125		130	135
Ser Glu Leu Phe	Thr Pro Glu Cys Lys	Phe Lys Glu Ser Val	Phe
140		145	150
Glu Asn Tyr Tyr	Val Ile Tyr Ser Ser	Met Leu Tyr Arg Gln	Gln
155		160	165
Glu Ser Gly Arg	Ala Trp Phe Leu Gly	Leu Asn Lys Glu Gly	Gln
170		175	180
Ala Met Lys Gly	Asn Arg Val Lys Lys	Thr Lys Pro Ala Ala	His
185		190	195
Phe Leu Pro Lys	Pro Leu Glu Val Ala	Met Tyr Arg Glu Pro	Ser
200		205	210
Leu His Asp Val	Gly Glu Thr Val Pro	Lys Pro Gly Val Thr	Pro
215		220	225
Ser Lys Ser Thr	Ser Ala Ser Ala Ile	Met Asn Gly Gly Lys	Pro
230		235	240
Val Asn Lys Ser	Lys Thr Thr		
245			

<210> 500
 <211> 2906
 <212> DNA
 <213> Homo Sapien

<400> 500
 ggggagagga attgaccatg taaaaggaga cttttttttt tgggtggtggt 50
 ggctgttggg tgccttgcaa aaatgaagga tgcaggacgc agctttctcc 100
 tggaaccgaa cgcaatggat aaactgattg tgcaagagag aaggaagaac 150
 gaagcttttt cttgtgagcc ctggatctta acacaaatgt gtatatgtgc 200
 acacagggag cattcaagaa tgaaataaac cagagttaga cccgcggggg 250
 ttggtgtgtt ctgacataaa taaataatct taaagcagct gttcccctcc 300
 ccacccccaa aaaaaaggat gattggaaat gaagaaccga ggattcacia 350
 agaaaaaagt atgttcattt ttctctataa aggagaaagt gagccaagga 400
 gatatttttg gaatgaaaag tttggggctt ttttagtaaa gtaaagaact 450
 ggtgtggtgg tgttttcctt tctttttgaa tttcccacaa gaggagagga 500
 aattaataat acatctgcaa agaaatttca gagaagaaaa gttgaccgcg 550
 gcagattgag gcattgattg ggggagagaa accagcagag cacagttgga 600
 tttgtgccta tgttgactaa aattgacgga taattgcagt tggatttttc 650
 ttcacatcaacc tccttttttt taaattttta ttcttttttg tatcaagatc 700
 atgcggttttc tcttgttctt aaccacctgg atttccatct ggatgttgct 750

gtgatcagtc tgaaatacaa ctgtttgaat tccagaagga ccaacaccag 800
 ataaattatg aatgttgaac aagatgacct tacatccaca gcagataatg 850
 ataggctcta ggtttaacag ggccctatatt gacccctgc ttgtggtgct 900
 gctggctctt caacttcttg tgggtggctgg tctggtgcgg gctcagacct 950
 gcccttctgt gtgctcctgc agcaaccagt tcagcaaggt gatttgtgtt 1000
 cggaaaaacc tgcgtgaggt tccggatggc atctccacca acacacggct 1050
 gctgaacctc catgagaacc aaatccagat catcaaagt aacagcttca 1100
 agcacttgag gcacttgga atcctacagt tgagtaggaa ccatatcaga 1150
 accattgaaa ttggggcttt caatggtctg gcgaacctca acactctgga 1200
 actctttgac aatcgtctta ctaccatccc gaatggagct tttgtatact 1250
 tgtctaaact gaaggagctc tggttgcgaa acaaccccat tgaaagcatc 1300
 ccttcttatg cttttaacag aattccttct ttgcgccgac tagacttagg 1350
 ggaattgaaa agactttcat acatctcaga aggtgccttt gaaggtctgt 1400
 ccaacttgag gtatttgaac cttgccatgt gcaaccttcg ggaaatccct 1450
 aacctcacac cgctcataaa actagatgag ctggatcttt ctgggaatca 1500
 tttatctgcc atcaggcctg gctctttcca gggtttgatg caccttcaaa 1550
 aactgtggat gatacagtcc cagattcaag tgattgaacg gaatgccttt 1600
 gacaaccttc agtcactagt ggagatcaac ctggcacaca ataactaac 1650
 attactgcct catgacctct tcaactccctt gcacatcta gagcggatac 1700
 attacatca caacccttgg aactgtaact gtgacatact gtggctcagc 1750
 tgggtggataa aagacatggc cccctogaac acagcttgtt gtgcccgggtg 1800
 taacactcct cccaatctaa aggggaggta cattggagag ctcgaccaga 1850
 attacttcac atgctatgct ccggtgattg tggagcccc tgcagacctc 1900
 aatgtcactg aaggcatggc agctgagctg aaatgtcggg cctccacatc 1950
 cctgacatct gtatcttggg ttactccaaa tggaacagtc atgacacatg 2000
 gggcgtacaa agtgcggata gctgtgctca gtgatggtac gttaaatttc 2050
 acaaagttaa ctgtgcaaga tacaggcatg tacacatgta tggtagtaaa 2100
 ttccgttggg aatactactg cttcagccac cctgaatgtt actgcagcaa 2150
 ccactactcc tttctcttac ttttcaaccg tcacagtaga gactatggaa 2200
 ccgtctcagg atgaggcacg gaccacagat aacaatgtgg gtcccactcc 2250
 agtggctgac tgggagacca ccaatgtgac cacctctctc acaccacaga 2300
 gcacaaggctc gacagagaaa accttcacca tcccagtgac tgatataaac 2350

agtgggatcc caggaattga tgaggatcatg aagactacca aaatcatcat 2400
 tgggtgtttt gtggccatca cactcatggc tgcagtgatg ctggtcattt 2450
 tctacaagat gaggaagcag caccatcggc aaaacatca cgccccaaca 2500
 aggactgttg aaattattaa tgtggatgat gagattacgg gagacacacc 2550
 catggaaagc cacctgcccc tgccctgctat cgagcatgag cacctaaatc 2600
 actataactc atacaaatct cccctcaacc acacaacaac agttaacaca 2650
 ataaattcaa tacacagttc agtgcatgaa ccgttattga tccgaatgaa 2700
 ctctaaagac aatgtacaag agactcaaat ctaaaacatt tacagagtta 2750
 caaaaaacaa acaatcaaaa aaaaagacag tttattaaaa atgacacaaa 2800
 tgactgggct aaatctactg tttcaaaaaa gtgtctttac aaaaaacaa 2850
 aaaagaaaag aaatttattt attaaaaatt ctattgtgat ctaaagcaga 2900
 caaaaa 2906

<210> 501

<211> 640

<212> PRT

<213> Homo Sapien

<400> 501

Met	Leu	Asn	Lys	Met	Thr	Leu	His	Pro	Gln	Gln	Ile	Met	Ile	Gly
1				5					10					15
Pro	Arg	Phe	Asn	Arg	Ala	Leu	Phe	Asp	Pro	Leu	Leu	Val	Val	Leu
			20						25					30
Leu	Ala	Leu	Gln	Leu	Leu	Val	Val	Ala	Gly	Leu	Val	Arg	Ala	Gln
			35						40					45
Thr	Cys	Pro	Ser	Val	Cys	Ser	Cys	Ser	Asn	Gln	Phe	Ser	Lys	Val
			50						55					60
Ile	Cys	Val	Arg	Lys	Asn	Leu	Arg	Glu	Val	Pro	Asp	Gly	Ile	Ser
			65						70					75
Thr	Asn	Thr	Arg	Leu	Leu	Asn	Leu	His	Glu	Asn	Gln	Ile	Gln	Ile
			80						85					90
Ile	Lys	Val	Asn	Ser	Phe	Lys	His	Leu	Arg	His	Leu	Glu	Ile	Leu
			95						100					105
Gln	Leu	Ser	Arg	Asn	His	Ile	Arg	Thr	Ile	Glu	Ile	Gly	Ala	Phe
			110						115					120
Asn	Gly	Leu	Ala	Asn	Leu	Asn	Thr	Leu	Glu	Leu	Phe	Asp	Asn	Arg
			125						130					135
Leu	Thr	Thr	Ile	Pro	Asn	Gly	Ala	Phe	Val	Tyr	Leu	Ser	Lys	Leu
			140						145					150
Lys	Glu	Leu	Trp	Leu	Arg	Asn	Asn	Pro	Ile	Glu	Ser	Ile	Pro	Ser
			155						160					165

Tyr	Ala	Phe	Asn	Arg	Ile	Pro	Ser	Leu	Arg	Arg	Leu	Asp	Leu	Gly	
				170					175					180	
Glu	Leu	Lys	Arg	Leu	Ser	Tyr	Ile	Ser	Glu	Gly	Ala	Phe	Glu	Gly	
				185					190					195	
Leu	Ser	Asn	Leu	Arg	Tyr	Leu	Asn	Leu	Ala	Met	Cys	Asn	Leu	Arg	
				200					205					210	
Glu	Ile	Pro	Asn	Leu	Thr	Pro	Leu	Ile	Lys	Leu	Asp	Glu	Leu	Asp	
				215					220					225	
Leu	Ser	Gly	Asn	His	Leu	Ser	Ala	Ile	Arg	Pro	Gly	Ser	Phe	Gln	
				230					235					240	
Gly	Leu	Met	His	Leu	Gln	Lys	Leu	Trp	Met	Ile	Gln	Ser	Gln	Ile	
				245					250					255	
Gln	Val	Ile	Glu	Arg	Asn	Ala	Phe	Asp	Asn	Leu	Gln	Ser	Leu	Val	
				260					265					270	
Glu	Ile	Asn	Leu	Ala	His	Asn	Asn	Leu	Thr	Leu	Leu	Pro	His	Asp	
				275					280					285	
Leu	Phe	Thr	Pro	Leu	His	His	Leu	Glu	Arg	Ile	His	Leu	His	His	
				290					295					300	
Asn	Pro	Trp	Asn	Cys	Asn	Cys	Asp	Ile	Leu	Trp	Leu	Ser	Trp	Trp	
				305					310					315	
Ile	Lys	Asp	Met	Ala	Pro	Ser	Asn	Thr	Ala	Cys	Cys	Ala	Arg	Cys	
				320					325					330	
Asn	Thr	Pro	Pro	Asn	Leu	Lys	Gly	Arg	Tyr	Ile	Gly	Glu	Leu	Asp	
				335					340					345	
Gln	Asn	Tyr	Phe	Thr	Cys	Tyr	Ala	Pro	Val	Ile	Val	Glu	Pro	Pro	
				350					355					360	
Ala	Asp	Leu	Asn	Val	Thr	Glu	Gly	Met	Ala	Ala	Glu	Leu	Lys	Cys	
				365					370					375	
Arg	Ala	Ser	Thr	Ser	Leu	Thr	Ser	Val	Ser	Trp	Ile	Thr	Pro	Asn	
				380					385					390	
Gly	Thr	Val	Met	Thr	His	Gly	Ala	Tyr	Lys	Val	Arg	Ile	Ala	Val	
				395					400					405	
Leu	Ser	Asp	Gly	Thr	Leu	Asn	Phe	Thr	Asn	Val	Thr	Val	Gln	Asp	
				410					415					420	
Thr	Gly	Met	Tyr	Thr	Cys	Met	Val	Ser	Asn	Ser	Val	Gly	Asn	Thr	
				425					430					435	
Thr	Ala	Ser	Ala	Thr	Leu	Asn	Val	Thr	Ala	Ala	Thr	Thr	Thr	Pro	
				440					445					450	
Phe	Ser	Tyr	Phe	Ser	Thr	Val	Thr	Val	Glu	Thr	Met	Glu	Pro	Ser	
				455					460					465	
Gln	Asp	Glu	Ala	Arg	Thr	Thr	Asp	Asn	Asn	Val	Gly	Pro	Thr	Pro	
				470					475					480	

Val	Val	Asp	Trp	Glu	Thr	Thr	Asn	Val	Thr	Thr	Ser	Leu	Thr	Pro
				485					490					495
Gln	Ser	Thr	Arg	Ser	Thr	Glu	Lys	Thr	Phe	Thr	Ile	Pro	Val	Thr
				500					505					510
Asp	Ile	Asn	Ser	Gly	Ile	Pro	Gly	Ile	Asp	Glu	Val	Met	Lys	Thr
				515					520					525
Thr	Lys	Ile	Ile	Ile	Gly	Cys	Phe	Val	Ala	Ile	Thr	Leu	Met	Ala
				530					535					540
Ala	Val	Met	Leu	Val	Ile	Phe	Tyr	Lys	Met	Arg	Lys	Gln	His	His
				545					550					555
Arg	Gln	Asn	His	His	Ala	Pro	Thr	Arg	Thr	Val	Glu	Ile	Ile	Asn
				560					565					570
Val	Asp	Asp	Glu	Ile	Thr	Gly	Asp	Thr	Pro	Met	Glu	Ser	His	Leu
				575					580					585
Pro	Met	Pro	Ala	Ile	Glu	His	Glu	His	Leu	Asn	His	Tyr	Asn	Ser
				590					595					600
Tyr	Lys	Ser	Pro	Phe	Asn	His	Thr	Thr	Thr	Val	Asn	Thr	Ile	Asn
				605					610					615
Ser	Ile	His	Ser	Ser	Val	His	Glu	Pro	Leu	Leu	Ile	Arg	Met	Asn
				620					625					630
Ser	Lys	Asp	Asn	Val	Gln	Glu	Thr	Gln	Ile					
				635					640					

<210> 502
 <211> 2458
 <212> DNA
 <213> Homo Sapien

<400> 502
 gcgccgggag cccatctgcc cccaggggca cggggcgcg ggccggctcc 50
 cgcccggcac atggctgcag ccacctcgcg cgcaccccga ggccgcgcg 100
 ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150
 agcaactgag cggggaagcg cccgcgtccg gggatcgga tgtccctcct 200
 ccttctcctc ttgctagttt cctactatgt tggaaccttg gggactcaca 250
 ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300
 caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350
 cgataatgaa gggaacaaaa aagtggatgat cacttactcc agtcgtcatg 400
 tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450
 aatttctctg caggagatgc ctcccttcag attgaacctc tgaagcccag 500
 tgatgagggc cggtaacact gtaagggttaa gaattcaggg cgctacgtgt 550
 ggagccatgt catcttaaaa gtcttagtga gaccatccaa gcccagtggt 600

gagttggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650
 gtcacacctct ggcacagagc ccatttgtga ttactggcag cgaatccgag 700
 agaaagaggg agaggatgaa cgtctgcctc ccaaactctag gattgactac 750
 aaccaccctg gacgagttct gctgcagaat cttaccatgt cctactctgg 800
 actgtaccag tgcacagcag gcaacgaagc tgggaaggaa agctgtgtgg 850
 tgcgagtaac tgtacagtat gtacaaagca tcggcatggg tgcaggagca 900
 gtgacaggca tagtggtctg agccctgctg attttctct tgggtgtggct 950
 gctaataccga aggaaagaca aagaaagata tgaggaagaa gagagaccta 1000
 atgaaattcg agaagatgct gaagctccaa aagcccgtct tgtgaaaccc 1050
 agtcctctt cctcaggctc tcggagctca cgctctgggt cttctctcac 1100
 tcgctccaca gcaaatagtg cctcagcag ccagcggaca ctgtcaactg 1150
 acgcagcacc ccagccaggg ctggccaccc aggcatacag cctagtgggg 1200
 ccagagggtga gaggttctga accaaagaaa gtccaccatg ctaatctgac 1250
 caaagcagaa accacacca gcatgatccc cagccagagc agagccttcc 1300
 aaacggtctg aattacaatg gacttgactc ccacgcttcc ctaggagtca 1350
 gggctcttgg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400
 ccagatgaga ggtcatctaa gtagcagtga gcattgcacg gaacagattc 1450
 agatgagcat tttccttata caataccaaa caagcaaaag gatgtaagct 1500
 gattcatctg taaaaaggca tcttattgtg ctttagacc agagtaaggg 1550
 aaagcaggag tccaaatcta tttgttgacc aggacctgtg gtgagaaggt 1600
 tggggaaagg tgaggtgaat atacctaaaa cttttaatgt gggatatttt 1650
 gtatcagtgc tttgattcac aattttcaag aggaaatggg atgctgtttg 1700
 taaattttct atgcatttct gcaaacttat tggattatta gttattcaga 1750
 cagtcaagca gaaccacag ccttattaca cctgtctaca ccatgtactg 1800
 agctaaccac ttctaagaaa ctccaaaaaa ggaaacatgt gtcttctatt 1850
 ctgacttaac ttcatttgtc ataagggttg gatattaatt tcaaggggag 1900
 ttgaaatagt gggagatgga gaagagtga tgagtctctc ccactctata 1950
 ctaatctcac tatttgtatt gagcccaaaa taactatgaa aggagacaaa 2000
 aatttgtgac aaaggattgt gaagagcttt ccatcttcat gatgttatga 2050
 ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100
 cctcaaatca gatgcctcta aggactttcc tgctagatat ttctggaagg 2150
 agaaaataca acatgtcatt tatcaacgtc cttagaaaga attcttctag 2200

agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250
 tctcttcttt ctgagaaaat gtgaaaccag aattgcaaga ctgggtggac 2300
 tagaaagggg gattagatca gttttctctt aatatgtcaa ggaaggtagc 2350
 cgggcatggg gccaggcacc tgtaggaaaa tccagcaggt ggaggttgca 2400
 gtgagccgag attatgcat tgcaactccag cctgggtgac agagcgggac 2450
 tccgtctc 2458

<210> 503
 <211> 373
 <212> PRT
 <213> Homo Sapien

<400> 503

Met	Ser	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Val	Ser	Tyr	Tyr	Val	Gly
1				5					10					15
Thr	Leu	Gly	Thr	His	Thr	Glu	Ile	Lys	Arg	Val	Ala	Glu	Glu	Lys
				20					25					30
Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Lys	Asp
				35					40					45
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly	Asn	Gln
				50					55					60
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn	Leu
				65					70					75
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe	Leu
				80					85					90
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Ser	Asp
				95					100					105
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr	Val
				110					115					120
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys	Pro
				125					130					135
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu	Thr
				140					145					150
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr	Tyr
				155					160					165
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu	Pro
				170					175					180
Pro	Lys	Ser	Arg	Ile	Asp	Tyr	Asn	His	Pro	Gly	Arg	Val	Leu	Leu
				185					190					195
Gln	Asn	Leu	Thr	Met	Ser	Tyr	Ser	Gly	Leu	Tyr	Gln	Cys	Thr	Ala
				200					205					210
Gly	Asn	Glu	Ala	Gly	Lys	Glu	Ser	Cys	Val	Val	Arg	Val	Thr	Val
				215					220					225

Gln Tyr Val Gln	Ser Ile Gly Met Val	Ala Gly Ala Val Thr Gly	230	235	240
Ile Val Ala Gly	Ala Leu Leu Ile Phe	Leu Leu Val Trp Leu Leu	245	250	255
Ile Arg Arg Lys	Asp Lys Glu Arg Tyr	Glu Glu Glu Glu Arg Pro	260	265	270
Asn Glu Ile Arg	Glu Asp Ala Glu Ala	Pro Lys Ala Arg Leu Val	275	280	285
Lys Pro Ser Ser	Ser Ser Ser Gly Ser	Arg Ser Ser Arg Ser Gly	290	295	300
Ser Ser Ser Thr	Arg Ser Thr Ala Asn	Ser Ala Ser Arg Ser Gln	305	310	315
Arg Thr Leu Ser	Thr Asp Ala Ala Pro	Gln Pro Gly Leu Ala Thr	320	325	330
Gln Ala Tyr Ser	Leu Val Gly Pro Glu	Val Arg Gly Ser Glu Pro	335	340	345
Lys Lys Val His	His Ala Asn Leu Thr	Lys Ala Glu Thr Thr Pro	350	355	360
Ser Met Ile Pro	Ser Gln Ser Arg Ala	Phe Gln Thr Val	365	370	

<210> 504
 <211> 3060
 <212> DNA
 <213> Homo Sapien

<400> 504
 cgcgaggcgc ggggagcctg ggaccaggag cgagagccgc ctacctgcag 50
 ccgccgccca cggcacggca gccaccatgg cgctcctgct gtgcttctgtg 100
 ctctgtgctg gagtagtgga tttcgccaga agtttgagta tcactactcc 150
 tgaagagatg attgaaaaag ccaaagggga aactgcctat ctgccatgca 200
 aatttacgct tagtcccga gaccaggac cgctggacat cgagtggctg 250
 atatcaccag ctgataatca gaaggtgat caagtgatta ttttatattc 300
 tggagacaaa atttatgatg actactatcc agatctgaaa ggccgagtac 350
 attttacgag taatgatctc aaatctggtg atgcatcaat aaatgtaacg 400
 aatttacaac tgtcagatat tggcacatat cagtgcacaa tgaaaaaagc 450
 tctgtgtgtt gcaaataaga agattcatct ggtagttctt gttaagcctt 500
 cagggtgcgag atgttacgtt gatggatctg aagaaattgg aagtgacttt 550
 aagataaaat gtgaaccaa agaaggttca cttccattac agtatgagtg 600
 gcaaaaattg tctgactcac agaaaatgcc cacttcatgg ttagcagaaa 650
 tgacttcatc tggtatatct gtaaaaaatg cctcttctga gtactctggg 700

acatacagct gtacagtcag aaacagagtg ggctctgac agtgcctgtt 750
 gcgctctaaac gttgtccctc cttcaaataa agctggacta attgcaggag 800
 ccattatagg aacttttgctt gctctagocg tcattggtct tatcatcttt 850
 tgctgtcgta aaaagcgagc agaagaaaaa tatgaaaagg aagttcatca 900
 cgatatcagg gaagatgtgc cacctccaaa gagccgtacg tccactgcca 950
 gaagctacat cggcagtaat cattcatccc tgggggtccat gtctccttcc 1000
 aacatggaag gatattccaa gactcagtat aaccaagtac caagtgaaga 1050
 ctttgaacgc actcctcaga gtccgactct cccacctgct aagttcaagt 1100
 acccttacia gactgatgga attacagttg tataaatatg gactactgaa 1150
 gaatctgaag tattgtatta ttgacttta ttttaggcct ctagtaaaga 1200
 cttaaagtgt ttttaaaaaa agcacaaggc acagagatta gagcagctgt 1250
 aagaacacat ctactttatg caatggcatt agacatgtaa gtcagatgtc 1300
 atgtcaaaat tagtacgagc caaattcttt gttaaaaaac cctatgtata 1350
 gtgacactga tagttaaag atgttttatt atattttcaa taactaccac 1400
 taacaaatth ttaacttttc atatgcatat tctgatatgt ggtcttttag 1450
 gaaaagtatg gttaatagtt gatttttcaa aggaaattht aaaattctta 1500
 cgttctgttt aatgtttttg ctatttagtt aaatacattg aagggaata 1550
 cccgttcttt tcccctttta tgcacacaac agaaacacgc gttgtcatgc 1600
 ctcaaactat tttttatttg caactacatg atttcacaca attctcttaa 1650
 acaacgacat aaaatagatt tccttgtata taaataactt acatacgctc 1700
 cataaagtaa atttctcaaag gtgctagaac aaatcgcca cttctacagt 1750
 gttctcgat ccaacagagt tgatgcacaa tatataaata ctcaagtcca 1800
 atattaaaaa cttaggcact tgactaactt taataaaatt tctcaaacta 1850
 tatcaatatc taaagtgc atatttttta agaaagatta ttctcaataa 1900
 cttctataaa aataagtttg atggtttggc ccatctaact tcactactat 1950
 tagtaagaac ttttaacttt taatgtgtag taaggtttat tctacctttt 2000
 tctcaacatg acaccaacac aatcaaaaac gaagttagtg aggtgctaac 2050
 atgtgaggat taatccagt atcccggtca caatgcattc caggaggagg 2100
 taccatgtc actggaattg ggcgatatgg tttatttttt cttccctgat 2150
 ttggataacc aaatggaaca ggaggaggat agtgattctg atggccattc 2200
 cctcgataca ttcttggtt tttctgggc aaaggtgcc acattggaag 2250
 aggtggaaat ataagttctg aaatctgtag ggaagagaac acattaagtt 2300

aattcaaagg aaaaaatcat catctatggt ccagatttct cattaagac 2350
aaagttaccc acaacactga gatcacatct aagtgacact cctattgtca 2400
ggtctaaata cattaataaac ctcatgtgta ataggcgtat aatgtataac 2450
aggtgaccaa tgttttctga atgcataaag aaatgaataa actcaaacac 2500
agtacttcct aaacaacttc aaccaaaaaa gaccaaaaca tggaacgaat 2550
ggaagcttgt aaggacatgc ttgttttagt ccagtgggtt ccacagctgg 2600
ctaagccagg agtcacttgg aggtttttta atacaaaaca ttggagctgg 2650
aggccattat ccttagcaaa ctaatgcaga aacagaaaat caactaccgc 2700
atgttctcac ttataagtgg gaggtaatga taagaactta tgaacacaaa 2750
gaaggaaaaca atagacattg gagtctatct gagaggggag ggtgggagaa 2800
ggaaaaggag cagaaaagat aactattgag tactgccttc acacctgggt 2850
gatgaaataa tatgtacaac aaatccctgt gacacatgtt tacctatgga 2900
acaaaccttc atgtgtatcc ctaaacctaa aataaaagt aaataaaagt 2950
aaataaaagt aaataaaagt aaataaaagt aaataaaagt aaataaaagt 3000
aaataaaagt aaataaaagt aaataaaagt aaataaaagt aaataaaagt 3050
aaataaaagt 3060

<210> 505

<211> 352

<212> PRT

<213> Homo Sapien

<400> 505

Met	Ala	Leu	Leu	Leu	Cys	Phe	Val	Leu	Leu	Cys	Gly	Val	Val	Asp	1	5	10	15
Phe	Ala	Arg	Ser	Leu	Ser	Ile	Thr	Thr	Pro	Glu	Glu	Met	Ile	Glu	20	25	30	
Lys	Ala	Lys	Gly	Glu	Thr	Ala	Tyr	Leu	Pro	Cys	Lys	Phe	Thr	Leu	35	40	45	
Ser	Pro	Glu	Asp	Gln	Gly	Pro	Leu	Asp	Ile	Glu	Trp	Leu	Ile	Ser	50	55	60	
Pro	Ala	Asp	Asn	Gln	Lys	Val	Asp	Gln	Val	Ile	Ile	Leu	Tyr	Ser	65	70	75	
Gly	Asp	Lys	Ile	Tyr	Asp	Asp	Tyr	Tyr	Pro	Asp	Leu	Lys	Gly	Arg	80	85	90	
Val	His	Phe	Thr	Ser	Asn	Asp	Leu	Lys	Ser	Gly	Asp	Ala	Ser	Ile	95	100	105	
Asn	Val	Thr	Asn	Leu	Gln	Leu	Ser	Asp	Ile	Gly	Thr	Tyr	Gln	Cys	110	115	120	
Lys	Val	Lys	Lys	Ala	Pro	Gly	Val	Ala	Asn	Lys	Lys	Ile	His	Leu				

	125		130		135
Val Val Leu Val	Lys Pro Ser Gly Ala	Arg Cys Tyr Val Asp Gly			
	140	145			150
Ser Glu Glu Ile	Gly Ser Asp Phe Lys	Ile Lys Cys Glu Pro Lys			
	155	160			165
Glu Gly Ser Leu	Pro Leu Gln Tyr Glu	Trp Gln Lys Leu Ser Asp			
	170	175			180
Ser Gln Lys Met	Pro Thr Ser Trp Leu	Ala Glu Met Thr Ser Ser			
	185	190			195
Val Ile Ser Val	Lys Asn Ala Ser Ser	Glu Tyr Ser Gly Thr Tyr			
	200	205			210
Ser Cys Thr Val	Arg Asn Arg Val Gly	Ser Asp Gln Cys Leu Leu			
	215	220			225
Arg Leu Asn Val	Val Pro Pro Ser Asn	Lys Ala Gly Leu Ile Ala			
	230	235			240
Gly Ala Ile Ile	Gly Thr Leu Leu Ala	Leu Ala Leu Ile Gly Leu			
	245	250			255
Ile Ile Phe Cys	Cys Arg Lys Lys Arg	Arg Glu Glu Lys Tyr Glu			
	260	265			270
Lys Glu Val His	His Asp Ile Arg Glu	Asp Val Pro Pro Pro Lys			
	275	280			285
Ser Arg Thr Ser	Thr Ala Arg Ser Tyr	Ile Gly Ser Asn His Ser			
	290	295			300
Ser Leu Gly Ser	Met Ser Pro Ser Asn	Met Glu Gly Tyr Ser Lys			
	305	310			315
Thr Gln Tyr Asn	Gln Val Pro Ser Glu	Asp Phe Glu Arg Thr Pro			
	320	325			330
Gln Ser Pro Thr	Leu Pro Pro Ala Lys	Phe Lys Tyr Pro Tyr Lys			
	335	340			345
Thr Asp Gly Ile	Thr Val Val				
	350				

<210> 506
 <211> 1705
 <212> DNA
 <213> Homo Sapien

<400> 506
 tgaaatgact tccacggctg ggacgggaac cttccacca cagctatgcc 50
 tctgattggt gaatggtgaa ggtgcctgtc taacttttct gtaaaaagaa 100
 ccagctgcct ccaggcagcc agccctcaag catcacttac aggaccagag 150
 ggacaagaca tgactgtgat gaggagctgc ttctgccaat ttaacaccaa 200
 gaagaattga ggctgcttgg gaggaaggcc aggaggaaca cgagactgag 250

agatgaattt tcaacagagg ctgcaaagcc tgtggacttt agccagaccc 300
 ttctgcccctc ctttgtctggc gacagcctct caaatgcaga tggttgtgct 350
 cccttgccctg ggtttttacc tgcttctctg gagccaggta tcagggggccc 400
 agggccaaga attccacttt gggccctgcc aagtgaaggg ggttgttccc 450
 cagaaactgt ggaagcctt ctgggctgtg aaagacacta tgcaagctca 500
 ggataacatc acgagtggcc ggctgctgca gcaggagggt ctgcagaacg 550
 tctcggatgc tgagagctgt taccttgtcc acaccctgct ggagttctac 600
 ttgaaaactg ttttcaaaaa ccaccacaat agaacagttg aagtcaggac 650
 tctgaagtca ttctctactc tggccaacaa ctttgttctc atcgtgtcac 700
 aactgcaacc cagtcaagaa aatgagatgt tttccatcag agacagtgca 750
 cacaggcggg ttctgctatt ccggagagca ttcaaacagt tggacgtaga 800
 agcagctctg accaaagccc ttgggggaagt ggacattctt ctgacctgga 850
 tgcagaaaatt ctacaagctc tgaatgtcta gaccaggacc tccctccccc 900
 tggcactggg ttgttccctg tgtcatttca aacagtctcc cttcctatgc 950
 tgttctactg acacttcacg cccttggcca tgggtcccat tcttggccca 1000
 ggattattgt caaagaagtc attctttaag cagcgccagt gacagtcagg 1050
 gaaggtgcct ctggatgctg tgaagagtct acagagaaga ttcttgtatt 1100
 tattacaact ctatttaatt aatgtcagta tttcaactga agttctattt 1150
 atttgtgaga ctgtaagtta catgaaggca gcagaatatt gtgccccatg 1200
 cttctttacc cctcacaatc cttgccacag tgtggggcag tggatgggtg 1250
 cttagtaagt acttaataaa ctgtggtgct ttttttggcc tgtctttgga 1300
 ttgttaaaaa acagagaggg atgcttggat gtaaaactga acttcagagc 1350
 atgaaaaatca cactgtcttc tgatatctgc agggacagag cattgggggtg 1400
 ggggtaagggt gcatctgttt gaaaagtaaa cgataaaatg tggattaaag 1450
 tgcccagcac aaagcagatc ctcaataaac atttcatttc ccaccacac 1500
 tcgccagctc accccatcat ccctttccct tggtgccctc cttttttttt 1550
 tatcctagtc attcttccct aatcttccac ttgagtgtca agctgacctt 1600
 gctgatgggtg acattgcacc tggatgtact atccaatctg tgatgacatt 1650
 ccctgctaataaaaagacaac ataactccaa aaaaaaaaaa aaaaaaaaaa 1700
 aaaaa 1705

<210> 507
 <211> 206
 <212> PRT

<213> Homo Sapien

<400> 507

Met	Asn	Phe	Gln	Gln	Arg	Leu	Gln	Ser	Leu	Trp	Thr	Leu	Ala	Arg
1				5					10					15
Pro	Phe	Cys	Pro	Pro	Leu	Leu	Ala	Thr	Ala	Ser	Gln	Met	Gln	Met
				20					25					30
Val	Val	Leu	Pro	Cys	Leu	Gly	Phe	Thr	Leu	Leu	Leu	Trp	Ser	Gln
				35					40					45
Val	Ser	Gly	Ala	Gln	Gly	Gln	Glu	Phe	His	Phe	Gly	Pro	Cys	Gln
				50					55					60
Val	Lys	Gly	Val	Val	Pro	Gln	Lys	Leu	Trp	Glu	Ala	Phe	Trp	Ala
				65					70					75
Val	Lys	Asp	Thr	Met	Gln	Ala	Gln	Asp	Asn	Ile	Thr	Ser	Ala	Arg
				80					85					90
Leu	Leu	Gln	Gln	Glu	Val	Leu	Gln	Asn	Val	Ser	Asp	Ala	Glu	Ser
				95					100					105
Cys	Tyr	Leu	Val	His	Thr	Leu	Leu	Glu	Phe	Tyr	Leu	Lys	Thr	Val
				110					115					120
Phe	Lys	Asn	His	His	Asn	Arg	Thr	Val	Glu	Val	Arg	Thr	Leu	Lys
				125					130					135
Ser	Phe	Ser	Thr	Leu	Ala	Asn	Asn	Phe	Val	Leu	Ile	Val	Ser	Gln
				140					145					150
Leu	Gln	Pro	Ser	Gln	Glu	Asn	Glu	Met	Phe	Ser	Ile	Arg	Asp	Ser
				155					160					165
Ala	His	Arg	Arg	Phe	Leu	Leu	Phe	Arg	Arg	Ala	Phe	Lys	Gln	Leu
				170					175					180
Asp	Val	Glu	Ala	Ala	Leu	Thr	Lys	Ala	Leu	Gly	Glu	Val	Asp	Ile
				185					190					195
Leu	Leu	Thr	Trp	Met	Gln	Lys	Phe	Tyr	Lys	Leu				
				200					205					

<210> 508

<211> 924

<212> DNA

<213> Homo Sapien

<400> 508

aaggagcagc ccgcaagcac caagtgagag gcatgaagtt acagtgtgtt 50
tccctttggc tcctgggtac aatactgata ttgtgctcag tagacaacca 100
cggctctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaa 200
gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacaggggtg 300

tcaaggatca tcaggagcca aacccccaaaa tcttgagaaa aatcagcagc 350
attgccaaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
acagaggcag tgtcactgca ggcaggaagc caccaatgcc accagagtca 450
tccatgacaa ctatgatcag ctggagggtcc acgctgctgc cattaatatcc 500
ctgggagagc tcgacgtctt tctagcctgg attaataaga atcatgaagt 550
aatgtttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600
cacccccctgt gcggtttact gtgggagaca gccacacctg aaggggaagg 650
agatggggaa ggccccttgc agctgaaagt cccactggct ggcctcaggc 700
tgtcttattc cgcttgaaaa taggcaaaaa gtctactgtg gtatttgtaa 750
taaactctat ctgctgaaag ggcctgcagg ccatcctggg agtaaagggc 800
tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
tgagccaagt gatatcctgt agtacacatt gtactgagtg gtttttctga 900
ataaattcca tattttacct atga 924

<210> 509

<211> 177

<212> PRT

<213> Homo Sapien

<400> 509

Met	Lys	Leu	Gln	Cys	Val	Ser	Leu	Trp	Leu	Leu	Gly	Thr	Ile	Leu	1	5	10	15
Ile	Leu	Cys	Ser	Val	Asp	Asn	His	Gly	Leu	Arg	Arg	Cys	Leu	Ile	20	25	30	
Ser	Thr	Asp	Met	His	His	Ile	Glu	Glu	Ser	Phe	Gln	Glu	Ile	Lys	35	40	45	
Arg	Ala	Ile	Gln	Ala	Lys	Asp	Thr	Phe	Pro	Asn	Val	Thr	Ile	Leu	50	55	60	
Ser	Thr	Leu	Glu	Thr	Leu	Gln	Ile	Ile	Lys	Pro	Leu	Asp	Val	Cys	65	70	75	
Cys	Val	Thr	Lys	Asn	Leu	Leu	Ala	Phe	Tyr	Val	Asp	Arg	Val	Phe	80	85	90	
Lys	Asp	His	Gln	Glu	Pro	Asn	Pro	Lys	Ile	Leu	Arg	Lys	Ile	Ser	95	100	105	
Ser	Ile	Ala	Asn	Ser	Phe	Leu	Tyr	Met	Gln	Lys	Thr	Leu	Arg	Gln	110	115	120	
Cys	Gln	Glu	Gln	Arg	Gln	Cys	His	Cys	Arg	Gln	Glu	Ala	Thr	Asn	125	130	135	
Ala	Thr	Arg	Val	Ile	His	Asp	Asn	Tyr	Asp	Gln	Leu	Glu	Val	His	140	145	150	
Ala	Ala	Ala	Ile	Lys	Ser	Leu	Gly	Glu	Leu	Asp	Val	Phe	Leu	Ala				

155

160

165

Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala
170 175

<210> 510
<211> 996
<212> DNA
<213> Homo Sapien

<400> 510
cccgtgccaa gagtgacgta agtaccgcct atagagtcta taggcccact 50
tggcttcgtt agaacgcggc tacaattaat acataacctt atgtatcata 100
cacatacgat ttaggtgaca ctatagaata acatccactt tgcctttctc 150
tccacaggtg tccactccca ggtccaactg cacctcgggt ctatcgataa 200
tctcagcacc agccactcag agcagggcac gatgttgggg gcccgctca 250
ggctctgggt ctgtgccttg tgcagcgtct gcagcatgag cgtcctcaga 300
gcctatccca atgcctcccc actgctcggc tccagctggg gtggcctgat 350
ccacctgtac acagccacag ccaggaacag ctaccacctg cagatccaca 400
agaatggcca tgtggatggc gcaccccatc agaccatcta cagtgccctg 450
atgatcagat cagaggatgc tggctttgtg gtgattacag gtgtgatgag 500
cagaagatac ctctgcatgg atttcagagg caacattttt ggatcacact 550
atttcgaccc ggagaactgc aggttccaac accagacgct ggaaaacggg 600
tacgacgtct accactctcc tcagtatcac ttcttggtca gtctgggccg 650
ggcgaagaga gccttcctgc caggcatgaa cccacccccg tactcccagt 700
tcctgtcccc gaggaacgag atccccctaa ttcacttcaa ccccccata 750
ccacggcggc acaccgggag cgccgaggac gactcggagc gggaccccct 800
gaacgtgctg aagccccggg ccgggatgac cccggccccg gcctcctgtt 850
cacaggagct cccgagcgcc gaggacaaca gcccgatggc cagtgacca 900
ttaggggtgg tcaggggcgg tcgagtgaac acgcacgctg ggggaacggg 950
cccgaaggc tgccgcccct tcgccaagtt catctagggt cgctgg 996

<210> 511
<211> 251
<212> PRT
<213> Homo Sapien

<400> 511
Met Leu Gly Ala Arg Leu Arg Leu Trp Val Cys Ala Leu Cys Ser
1 5 10 15
Val Cys Ser Met Ser Val Leu Arg Ala Tyr Pro Asn Ala Ser Pro
20 25 30

Leu	Leu	Gly	Ser	Ser	Trp	Gly	Gly	Leu	Ile	His	Leu	Tyr	Thr	Ala	
				35					40					45	
Thr	Ala	Arg	Asn	Ser	Tyr	His	Leu	Gln	Ile	His	Lys	Asn	Gly	His	
				50					55					60	
Val	Asp	Gly	Ala	Pro	His	Gln	Thr	Ile	Tyr	Ser	Ala	Leu	Met	Ile	
				65					70					75	
Arg	Ser	Glu	Asp	Ala	Gly	Phe	Val	Val	Ile	Thr	Gly	Val	Met	Ser	
				80					85					90	
Arg	Arg	Tyr	Leu	Cys	Met	Asp	Phe	Arg	Gly	Asn	Ile	Phe	Gly	Ser	
				95					100					105	
His	Tyr	Phe	Asp	Pro	Glu	Asn	Cys	Arg	Phe	Gln	His	Gln	Thr	Leu	
				110					115					120	
Glu	Asn	Gly	Tyr	Asp	Val	Tyr	His	Ser	Pro	Gln	Tyr	His	Phe	Leu	
				125					130					135	
Val	Ser	Leu	Gly	Arg	Ala	Lys	Arg	Ala	Phe	Leu	Pro	Gly	Met	Asn	
				140					145					150	
Pro	Pro	Pro	Tyr	Ser	Gln	Phe	Leu	Ser	Arg	Arg	Asn	Glu	Ile	Pro	
				155					160					165	
Leu	Ile	His	Phe	Asn	Thr	Pro	Ile	Pro	Arg	Arg	His	Thr	Arg	Ser	
				170					175					180	
Ala	Glu	Asp	Asp	Ser	Glu	Arg	Asp	Pro	Leu	Asn	Val	Leu	Lys	Pro	
				185					190					195	
Arg	Ala	Arg	Met	Thr	Pro	Ala	Pro	Ala	Ser	Cys	Ser	Gln	Glu	Leu	
				200					205					210	
Pro	Ser	Ala	Glu	Asp	Asn	Ser	Pro	Met	Ala	Ser	Asp	Pro	Leu	Gly	
				215					220					225	
Val	Val	Arg	Gly	Gly	Arg	Val	Asn	Thr	His	Ala	Gly	Gly	Thr	Gly	
				230					235					240	
Pro	Glu	Gly	Cys	Arg	Pro	Phe	Ala	Lys	Phe	Ile					
				245					250						

<210> 512
 <211> 2015
 <212> DNA
 <213> Homo Sapien

<400> 512
 ggaaaaggta cccgcgagag acagccagca gttctgtgga gcagcggtgg 50
 ccggctagga tgggctgtct ctgggggtctg gctotgcccc ttttcttctt 100
 ctgctgggag gttgggggtct ctgggagctc tgcaggcccc agcaccgcga 150
 gagcagacac tgcatgaca acggacgaca cagaagtgcc cgctatgact 200
 ctagcaccgg gccacgccgc tctggaaact caaacgctga gcgctgagac 250
 ctcttctagg gcctcaaccc cagccggccc cattccagaa gcagagacca 300

ggggagccaa gagaatttcc cctgcaagag agaccaggag tttcacaaaa 350
 acatctccca acttcatggt gctgatcgcc acctccgtgg agacatcagc 400
 cgccagtggc agccccgagg gagctggaat gaccacagtt cagaccatca 450
 caggcagtga tcccgaggaa gccatctttg acaccctttg caccgatgac 500
 agctctgaag aggcaaagac actcacaatg gacatattga cattgggtca 550
 cacctccaca gaagctaagg gcctgtcctc agagagcagt gcctcttccg 600
 acggccccc a tccagtcac acccgtcac gggcctcaga gagcagcgcc 650
 tcttccgacg gccccatcc agtcacaccc cgtcacggg cctcagagag 700
 cagcgctct tccgacggcc cccatccagt catcaccccg tcatgggtccc 750
 cgggatctga tgtcactctc ctgctgaag ccctgggtgac tgtcaciaaac 800
 atcgagggtta ttaattgcag catcacagaa atagaaacaa caacttccag 850
 catccctggg gcctcagaca tagatctcat cccacaggaa ggggtgaagg 900
 cctcgtccac ctccgatcca ccagctctgc ctgactccac tgaagcaaaa 950
 ccacacatca ctgagggtcac agcctctgcc gagaccctgt ccacagccgg 1000
 caccacagag tcagctgcac ctcatgccac ggttgggacc cactcccca 1050
 ctaacagcgc cacagaaaga gaagtgcag caccggggc cagaccctc 1100
 agtggagctc tggtcacagt tagcaggaat cccctggaag aaacctcagc 1150
 cctctctgtt gagacacaa gttacgtcaa agtctcagga gcagctccgg 1200
 tctccataga ggctgggtca gcagtgggca aaacaacttc ctttgctggg 1250
 agctctgctt cctcctacag cccctoggaa gccgccctca agaacttcac 1300
 cccttcagag acaccgacca tggacatgc aaccaagggg cccttcccca 1350
 ccagcagga ccctcttcct tctgtccctc cgactacaac caacagcagc 1400
 cgagggacga acagcacctt agccaagatc acaacctcag cgaagaccac 1450
 gatgaagccc caacagccac gccacgact gcccgacga ggccgaccac 1500
 agacgtgagt gcaggtgaaa atggaggttt cctcctcctg cggctgagt 1550
 tggcttcccc ggaagacctc actgaccca gagtggcaga aaggctgatg 1600
 cagcagctcc accgggaact ccacgcccac ggcctcact tccaggtctc 1650
 ctactgctg gtcaggagag gctaacggac atcagctgca gccaggcatg 1700
 tcccgatgc caaaagaggg tgctgcccct agcctgggccc cccaccgaca 1750
 gactgcagct gcgttactgt gctgagaggt acccagaagg ttcccatgaa 1800
 gggcagcatg tccaagcccc taaccccaga tgtggcaaca ggaccctcgc 1850
 tcacatccac cggagtgtat gtatggggag gggcttcacc tgttcccaga 1900

gggtgccttg gactcacctt ggcacatggt ctgtgtttca gtaaagagag 1950
acctgatcac ccatctgtgt gcttccatcc tgcattaaaa ttcactcagt 2000
gtggcccaaa aaaaa 2015

<210> 513
<211> 482
<212> PRT
<213> Homo Sapien

<400> 513
Met Gly Cys Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys
1 5 10 15
Trp Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg
20 25 30
Arg Ala Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala
35 40 45
Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu
50 55 60
Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Ile
65 70 75
Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg
80 85 90
Glu Thr Arg Ser Phe Thr Lys Thr Ser Pro Asn Phe Met Val Leu
95 100 105
Ile Ala Thr Ser Val Glu Thr Ser Ala Ala Ser Gly Ser Pro Glu
110 115 120
Gly Ala Gly Met Thr Thr Val Gln Thr Ile Thr Gly Ser Asp Pro
125 130 135
Glu Glu Ala Ile Phe Asp Thr Leu Cys Thr Asp Asp Ser Ser Glu
140 145 150
Glu Ala Lys Thr Leu Thr Met Asp Ile Leu Thr Leu Ala His Thr
155 160 165
Ser Thr Glu Ala Lys Gly Leu Ser Ser Glu Ser Ser Ala Ser Ser
170 175 180
Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg Ala Ser Glu Ser
185 190 195
Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile Thr Pro Ser Arg
200 205 210
Ala Ser Glu Ser Ser Ala Ser Ser Asp Gly Pro His Pro Val Ile
215 220 225
Thr Pro Ser Trp Ser Pro Gly Ser Asp Val Thr Leu Leu Ala Glu
230 235 240
Ala Leu Val Thr Val Thr Asn Ile Glu Val Ile Asn Cys Ser Ile
245 250 255

Thr	Glu	Ile	Glu	Thr	Thr	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Ser	Asp	
				260					265					270	
Ile	Asp	Leu	Ile	Pro	Thr	Glu	Gly	Val	Lys	Ala	Ser	Ser	Thr	Ser	
				275					280					285	
Asp	Pro	Pro	Ala	Leu	Pro	Asp	Ser	Thr	Glu	Ala	Lys	Pro	His	Ile	
				290					295					300	
Thr	Glu	Val	Thr	Ala	Ser	Ala	Glu	Thr	Leu	Ser	Thr	Ala	Gly	Thr	
				305					310					315	
Thr	Glu	Ser	Ala	Ala	Pro	His	Ala	Thr	Val	Gly	Thr	Pro	Leu	Pro	
				320					325					330	
Thr	Asn	Ser	Ala	Thr	Glu	Arg	Glu	Val	Thr	Ala	Pro	Gly	Ala	Thr	
				335					340					345	
Thr	Leu	Ser	Gly	Ala	Leu	Val	Thr	Val	Ser	Arg	Asn	Pro	Leu	Glu	
				350					355					360	
Glu	Thr	Ser	Ala	Leu	Ser	Val	Glu	Thr	Pro	Ser	Tyr	Val	Lys	Val	
				365					370					375	
Ser	Gly	Ala	Ala	Pro	Val	Ser	Ile	Glu	Ala	Gly	Ser	Ala	Val	Gly	
				380					385					390	
Lys	Thr	Thr	Ser	Phe	Ala	Gly	Ser	Ser	Ala	Ser	Ser	Tyr	Ser	Pro	
				395					400					405	
Ser	Glu	Ala	Ala	Leu	Lys	Asn	Phe	Thr	Pro	Ser	Glu	Thr	Pro	Thr	
				410					415					420	
Met	Asp	Ile	Ala	Thr	Lys	Gly	Pro	Phe	Pro	Thr	Ser	Arg	Asp	Pro	
				425					430					435	
Leu	Pro	Ser	Val	Pro	Pro	Thr	Thr	Thr	Asn	Ser	Ser	Arg	Gly	Thr	
				440					445					450	
Asn	Ser	Thr	Leu	Ala	Lys	Ile	Thr	Thr	Ser	Ala	Lys	Thr	Thr	Met	
				455					460					465	
Lys	Pro	Gln	Gln	Pro	Arg	Pro	Arg	Leu	Pro	Gly	Arg	Gly	Arg	Pro	
				470					475					480	

Gln Thr

<210> 514

<211> 2284

<212> DNA

<213> Homo Sapien

<400> 514

gcggagcatc cgctgcggtc ctgcgccgaga ccccgcgcg gattcgccgg 50

tccttcccg cggcgcgaca gagctgtcct cgcacctgga tggcagcagg 100

ggcgccggg tcctctcgac gccagagaga aatctcatca tctgtgcagc 150

cttcttaaag caaactaaga ccagagggag gattatcctt gacctttgaa 200

gaccaaaact aaactgaaat ttaaaatggt cttcggggga gaaggagct 250

tgacttacac tttggtaata atttgcttcc tgacactaag gctgtctgct 300
 agtcagaatt gcctcaaaaa gagtctagaa gatgttgtca ttgacatcca 350
 gtcattctctt tctaagggaa tcagaggcaa tgagcccgtata taaacttcaa 400
 ctcaagaaga ctgcattaat tcttgctgtt caacaaaaaa catatcaggg 450
 gacaaagcat gtaacttgat gatcttcgac actcgaaaaa cagctagaca 500
 acccaactgc tacctatattt tctgtcccaa cgaggaagcc tgtccattga 550
 aaccagcaaa aggacttatg agttacagga taattacaga ttttccatct 600
 ttgaccagaa atttgccaag ccaagagtta cccaggaag attctctctt 650
 acatggccaa ttttcacaag cagtcactcc cctagcccat catcacacag 700
 attattcaaa gccacccgat atctcatgga gagacacact ttctcagaag 750
 tttggatcct cagatcacct ggagaaacta ttttaagatgg atgaagcaag 800
 tgcccagctc cttgcttata aggaaaaagg ccattctcag agttcacaat 850
 tttcctctga tcaagaaata gctcatctgc tgcctgaaaa tgtgagtgcg 900
 ctcccagcta cgggtggcagt tgcttctcca cataccacct cggctactcc 950
 aaagcccgcc acccttctac ccaccaatgc ttcagtgaca cttcttgga 1000
 cttcccagcc acagctggcc accacagctc cacctgtaac cactgtcact 1050
 tctcagcctc ccacgacct catttctaca gtttttacac gggctgcggc 1100
 tacactccaa gcaatggcta caacagcagt tctgactacc acctttcagg 1150
 cacctacgga ctcgaaaggc agcttagaaa ccataccgtt tacagaaatc 1200
 tccaacttaa ctttgaacac agggaatgtg tataacccta ctgcactttc 1250
 tatgtcaaat gtggagtctt ccactatgaa taaaactgct tcctgggaag 1300
 gtagggaggc cagtccaggc agttcctccc agggcagtgt tccagaaaat 1350
 cagtaaggcc ttocatttga aaaatggctt cttatcgggt ccctgtctct 1400
 tgggtgtcctg ttctgtgtga taggcctcgt cctcctgggt agaactctt 1450
 cggaatcact ccgcaggaaa cgttactcaa gactggatta tttgatcaat 1500
 gggatctatg tggacatcta aggatggaac tcgggtgtctc ttaattcatt 1550
 tagtaaccag aagcccaaat gcaatgagtt tctgctgact tgctagtctt 1600
 agcaggaggt tgtattttga agacaggaaa atgccccctt ctgctttcct 1650
 tttttttttt ggagacagag tcttgctctg ttgccaggc tggagtgcag 1700
 tagcacgata tcggctctca ccgcaacctc cgtctcctgg gttcaagcga 1750
 ttctcctgcc tcagcctcct aagtatctgg gattacaggc atgtgccacc 1800
 acacctgggt gatttttga ttttagtag agacggggtt tcaccatggt 1850

ggtcaggctg gtctcaaact cctgacctag tgatccaccc tcctcggcct 1900
 cccaaagtgc tgggattaca ggcattgagcc accacagctg gcccccttct 1950
 gttttatggt tgggttttga gaaggaatga agtggaacc aaattaggta 2000
 attttgggta atctgtctct aaaatattag ctaaaaacaa agctctatgt 2050
 aaagtaataa agtataattg ccatataaat ttcaaaattc aactggcttt 2100
 tatgcaaaga aacagggttag gacatctagg ttccaattca ttcacattct 2150
 tggttccaga taaaatcaac tgtttatata aatttctaata ggatttgctt 2200
 ttcttttttat atggattcct ttaaaactta ttccagatgt agttccttcc 2250
 aattaaatat ttgaataaat cttttgttac tcaa 2284

<210> 515

<211> 431

<212> PRT

<213> Homo Sapien

<400> 515

Met	Phe	Phe	Gly	Gly	Glu	Gly	Ser	Leu	Thr	Tyr	Thr	Leu	Val	Ile
1				5					10					15
Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25					30
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35					40					45
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50					55					60
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65					70					75
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80					85					90
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95					100					105
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110					115					120
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125					130					135
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140					145					150
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155					160					165
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170					175					180
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185					190					195

Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser	
				200					205					210	
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala	
				215					220					225	
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala	
				230					235					240	
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
				245					250					255	
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	
				260					265					270	
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	
				275					280					285	
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr	
				290					295					300	
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Asp	Ser	Lys	Gly	
				305					310					315	
Ser	Leu	Glu	Thr	Ile	Pro	Phe	Thr	Glu	Ile	Ser	Asn	Leu	Thr	Leu	
				320					325					330	
Asn	Thr	Gly	Asn	Val	Tyr	Asn	Pro	Thr	Ala	Leu	Ser	Met	Ser	Asn	
				335					340					345	
Val	Glu	Ser	Ser	Thr	Met	Asn	Lys	Thr	Ala	Ser	Trp	Glu	Gly	Arg	
				350					355					360	
Glu	Ala	Ser	Pro	Gly	Ser	Ser	Ser	Gln	Gly	Ser	Val	Pro	Glu	Asn	
				365					370					375	
Gln	Tyr	Gly	Leu	Pro	Phe	Glu	Lys	Trp	Leu	Leu	Ile	Gly	Ser	Leu	
				380					385					390	
Leu	Phe	Gly	Val	Leu	Phe	Leu	Val	Ile	Gly	Leu	Val	Leu	Leu	Gly	
				395					400					405	
Arg	Ile	Leu	Ser	Glu	Ser	Leu	Arg	Arg	Lys	Arg	Tyr	Ser	Arg	Leu	
				410					415					420	
Asp	Tyr	Leu	Ile	Asn	Gly	Ile	Tyr	Val	Asp	Ile					
				425					430						

<210> 516

<211> 2749

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 516

ctcccacggt gtccagcgcc cagaatgcgg cttctggtcc tgctatgggg 50

ttgcctgctg ctcccaggtt atgaagccct ggagggccca gaggaaatca 100

gcgggttcga aggggacact gtgtccctgc agtgcaccta cagggaagag 150
 ctgaggggacc accggaagta ctggtgcagg aaggggtggga tcctcttctc 200
 tcgctgctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250
 agggcaggggt gtccatccgt gacagccgcc aggagctctc gtcattgtg 300
 accctgtgga acctcaccct gcaagacgt ggggagtact ggtgtgggg 350
 cgaaaaacgg ggccccgatg agtctttact gatctctctg ttctctttc 400
 caggaccctg ctgtccctcc tccccctctc ccaccttcca gcctctggct 450
 acaacacgcc tgcagcccaa ggcaaaagct cagcaaacc agccccagg 500
 attgacttct cctgggctct acccggcagc caccacagcc aagcagggga 550
 agacaggggc tgaggccct ccattgccag ggacttcca gtacgggcac 600
 gaaaggactt ctcatgacac aggaacctct cctcaccag cgacctctc 650
 tcctgcagg agtcccgcc ccccatgca gctggactcc acctcagcag 700
 aggacaccag tccagctctc agcagtggca gctctaagcc cagggtgtcc 750
 atcccgatgg tccgcatact ggccccagtc ctggtgctgc tgagccttct 800
 gtcagccgca ggctgatcg ccttctgcag ccacctgctc ctgtggagaa 850
 aggaagctca acaggccacg gagacacaga ggaacgagaa gttctggctc 900
 tcacgcttga ctgcggagga aaaggaagcc ccttcccagg ccctgaggg 950
 ggacgtgatc tcgatgcctc ccctccacac atctgaggag gagctgggct 1000
 tctcgaagtt tgtctcagcg tagggcagga ggccctcctg gccaggccag 1050
 cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagctttc 1100
 cacctcagcc tcagagtcca gctgcccga ctccagggt ctccccacc 1150
 tccccaggct ctctcttgc atgttccagc ctgacctaga agcgtttgtc 1200
 agccctggag ccagagcgg tggccttgc cttccggctg gagactggga 1250
 catccctgat aggttcacat ccctgggcag agtaccaggc tgctgaccct 1300
 cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350
 aggaactcct gggcctcatg ccagtgctg gacctgcct tcctccact 1400
 ccagacccca ccttgtcttc cctccctggc gtcctcagac ttagtccac 1450
 ggtctcctgc atcagctggg gatgaagagg agcatgctgg ggtgagactg 1500
 ggattctggc ttctcttga accaactgca tccagccctt caggaagcct 1550
 gtgaaaaacg tgattcctgg cccaccaag acccacaaa accatctctg 1600
 ggcttggtgc aggactctga attctaaca tgcccagtga ctgtcgact 1650
 tgagtttgag ggccagtgg cctgatgaac gctcacacc cttcagctta 1700

gagtctgcat ttgggctgtg acgtctccac ctgcccacat agatctgctc 1750
 tgtctgcgac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800
 caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850
 acagaagtgg ttgcctttnc catttgccct ccttggacca tgccttcttg 1900
 cctttggaaa aaatgatgaa gaaaaccttg gctccttcct tgtctggaaa 1950
 gggttacttg cctatgggtt ctgggtggcta gagagaaaag tagaaaacca 2000
 gagtgcacgt aggtgtctaa cacagaggag agtaggaaca gggcggatac 2050
 ctgaaggatga ctccgagtcc agccccctgg agaaggggtc ggggggtggtg 2100
 gtaaagtagc acaactacta tttttttct ttttccatta ttattgtttt 2150
 ttaagacaga atctcgtgct gctgccagg ctggagtga gtggcacgat 2200
 ctgcaaactc cgctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250
 gagtagctgg gattacaggc acgcaccacc acacctggct aatttttgta 2300
 cttttagtag agatgggggtt tcaccatgtt ggccaggctg gtcttgaact 2350
 cctgacctca aatgagcctc ctgcttcagt ctcccaaatt gccgggatta 2400
 caggcatgag ccaactgtgc tggccctatt tcctttaaaa agtgaaatta 2450
 agagttgttc agtatgcaaa acttggaag atggaggaga aaaagaaaag 2500
 gaagaaaaaa atgtcaccca tagtctcacc agagactatc attatttcgt 2550
 tttgtgttac ttccttcac tcttttcttc ttacataat ttgccggtgt 2600
 tctttttaca gagcaattat cttgtatata caactttgta tcctgccttt 2650
 tccaccttat cgttccatca ctttattcca gcacttctct gtgttttaca 2700
 gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 517

<211> 332

<212> PRT

<213> Homo Sapien

<400> 517

Met	Arg	Leu	Leu	Val	Leu	Leu	Trp	Gly	Cys	Leu	Leu	Leu	Pro	Gly
1				5					10					15
Tyr	Glu	Ala	Leu	Glu	Gly	Pro	Glu	Glu	Ile	Ser	Gly	Phe	Glu	Gly
				20					25					30
Asp	Thr	Val	Ser	Leu	Gln	Cys	Thr	Tyr	Arg	Glu	Glu	Leu	Arg	Asp
				35					40					45
His	Arg	Lys	Tyr	Trp	Cys	Arg	Lys	Gly	Gly	Ile	Leu	Phe	Ser	Arg
				50					55					60
Cys	Ser	Gly	Thr	Ile	Tyr	Ala	Glu	Glu	Glu	Gly	Gln	Glu	Thr	Met
				65					70					75

Lys Gly Arg Val	Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu	80	85	90
Ile Val Thr Leu	Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr	95	100	105
Trp Cys Gly Val	Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile	110	115	120
Ser Leu Phe Val	Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser	125	130	135
Pro Thr Phe Gln	Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala	140	145	150
Lys Ala Gln Gln	Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu	155	160	165
Tyr Pro Ala Ala	Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu	170	175	180
Ala Pro Pro Leu	Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr	185	190	195
Ser Gln Tyr Thr	Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro	200	205	210
Ala Gly Ser Ser	Arg Pro Pro Met Gln Leu Asp Ser Thr Ser Ala	215	220	225
Glu Asp Thr Ser	Pro Ala Leu Ser Ser Gly Ser Ser Lys Pro Arg	230	235	240
Val Ser Ile Pro	Met Val Arg Ile Leu Ala Pro Val Leu Val Leu	245	250	255
Leu Ser Leu Leu	Ser Ala Ala Gly Leu Ile Ala Phe Cys Ser His	260	265	270
Leu Leu Leu Trp	Arg Lys Glu Ala Gln Gln Ala Thr Glu Thr Gln	275	280	285
Arg Asn Glu Lys	Phe Trp Leu Ser Arg Leu Thr Ala Glu Glu Lys	290	295	300
Glu Ala Pro Ser	Gln Ala Pro Glu Gly Asp Val Ile Ser Met Pro	305	310	315
Pro Leu His Thr	Ser Glu Glu Glu Leu Gly Phe Ser Lys Phe Val	320	325	330

Ser Ala

<210> 518

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

ccctgcagtg cacctacagg gaag 24

<210> 519

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

ctgtcttccc ctgcttggct gtgg 24

<210> 520

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

ggtgcaggaa ggggtgggatc ctcttctctc gctgctctgg ccacatc 47

<210> 521

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

ccagtgcaca gcaggcaacg aagc 24

<210> 522

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 522

actaggctgt atgcctgggt gggc 24

<210> 523

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 523

gtatgtacaa agcatcggca tggttgcagg agcagtgaca ggc 43

<210> 524

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 524
aatctcagca ccagccactc agagca 26

<210> 525

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 525
gttaaagagg gtgcccttcc agcga 25

<210> 526

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 526
tatcccaatg cctccccact gctc 24

<210> 527

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 527
gatgaacttg gcgaaggggc ggca 24

<210> 528

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 528
aggaggatt atccttgacc tttgaagacc 30

<210> 529

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 529
gaagcaagtg cccagctc 18

<210> 530

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

cggtccctg ctctttgg 18

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 531

cacgtagct gggagcgcac tcac 24

<210> 532

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 532

agtgttaagtc aagctccc 18